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NUMBER 12

• LEADING ARTICLES •

	PAGE
Psychic Hygiene - - - - -	553
Management of Inflammatory Disease - -	556
Extensive Effusive Pericarditis - - - -	560
Non-Narcotic Addictions - - - - -	563
Contraindications to Atabrine - - - - -	566
Gonorrhea in the Male - - - - -	568
X-Ray Treatment of Thyrotoxicosis - - -	574
Editorials - - - - -	594

• COMPLETE TABLE OF CONTENTS ON ADVERTISING PAGE FOUR •

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CURRAN POPE, M.D.

CLINICAL MEDICINE AND SURGERY

GEORGE B. LAKE, M.D.

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VOL. 41

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NO. 12

EDITORIAL

Dr. Curran Pope

THE forebears of the Pope family came to America in 1643 and settled in Virginia, assuming a place among the famous "first families." Several generations later, one branch of the family journeyed out into the wilderness and helped found the State of Kentucky, in whose affairs some of the Popes, among them Colonel Curran Pope, of Civil War fame, the grandfather of the subject of this sketch, have been active ever since.

The future physician was born in Louisville, November 12, 1866, with a splendid family background. He attended the public schools and the private Rugby School and during his later youth spent some time on the ranch of his uncle, out where the West was really "wild and woolly." He also had three years of business training before entering upon the study of medicine.

He received his degree from the medical department of the University of Louisville in 1889, spent a year as resident physician in the Kentucky Central Hospital for the Insane, did graduate study in New York City, under Dr. Charles A. Dana, the neurologist, and then went to Europe for more work in neurology and psychiatry, in London, Paris, Vienna, Berlin and other medical centers.

In 1891 he returned to his home city and entered upon the practice of his profession and also upon his career as a teacher, becoming lecturer on pathology, bacteriology and microscopy at the Hospital College of Medicine. From 1895 to 1899 he was professor of neurology and psychiatry at Louisville College of Medicine; from 1902 to 1908, adjunct professor of neurology, psychiatry and physi-

cal therapy, Kentucky School of Medicine; and from 1909 to 1910, professor of physical therapy at his *alma mater*. After this he gave up his college teaching work and devoted his entire time to the Pope Hospital for Nervous and Chronic Diseases, of which he was the founder and medical director.

He was a fellow of the A. M. A. and a member of its House of Delegates in 1912; past-president of the Ohio Valley Medical Society, the American and Western Physical Therapy Associations, the American Congress of Physical Therapy and the American Electrotherapeutic Association; as well as being an associate of the American College of Physicians and a member of various other professional, civic and patriotic societies, the last-named including the Sons of the American Revolution and the Patriots and Founders of America. He was also active in several large business enterprises, among them the Kentucky State Life Insurance Company, of which he was first vice-president, and served on the Kentucky Board of Charities and Corrections under two governors.

It seems probable that, with all his many professional and other activities, Dr. Pope will be longest remembered as one of the enthusiastic pioneers of modern physical therapy, his one published book being on "Practical Hydrology." He continued to teach throughout his life, by means of many lectures, to medical and lay audiences, and by voluminous and valuable contributions to the periodical literature of his profession.

Those who knew Dr. Pope (and they were many, for his influence extended far beyond

his community and his State) will remember him as an eager, dynamic and attractive personality and a bold and cogent thinker, who was always among the leaders in all of the many lines of activity which engaged his wide and very human interests and exerted a profound effect upon the thought of his time, especially among those who came into personal touch with him.

To his many friends, the fact that he brought his vivid life to an untimely close (he was only 67 years old) by his own act, on September 21, 1934, will seem almost unbelievable. His keen glance, his vigorous, snowy head and his inspiring voice will be sorely missed at the gatherings where his presence lent dignity, enthusiasm and value to many occasions.

An idea isn't worth much until a man is found who has the energy and ability to make it work.—*Little Journal for Physicians.*

Alcohol and Civilization

ONE of the earliest of man's biologic inventions (so old, in fact, that it antedates the beginning of authenticated history) was the domestication of fungi for the production of alcohol.

There is little doubt that our semi-barbarous progenitors frequently misused the thing which their budding inventive genius had produced; and the undeveloped ones—the barbarians of today—often do so even yet, so that a considerable public sentiment developed during the past generation, and is still maintained in some parts of the country, to the effect that the use of this substance should be forbidden, except for medicinal purposes.

A study of history will, however, show that, during the periods when civilization has touched its highest points, the intelligent use of alcoholic beverages (especially wines) has been most widespread and most favorably considered.

Many people, including a considerable number of physicians, still hold the erroneous opinion that alcohol is a stimulant; whereas the fact is that it is always a depressant—in large doses, even an anesthetic—and that the first faculties to be depressed or inhibited are those which are the peculiar possession of the more highly civilized section of the population—the faculties of the higher intellect and reason.

The psychic effects of overdoses of alcohol are widely known, even by the laity. The relaxation of the ordinary social inhibitions,

so that one's conduct and speech are at a level lower than that usual to the individual, followed, if the doses are still more excessive, by unconsciousness and sometimes by active delirium (*mania à potu* or *delerium tremens*) are matters of common, direct or indirect experience—so much so that these effects have entirely overshadowed, in the minds of many persons, the possible salutary results which may accrue, especially to people of the higher intellectual types, from the reasonable and intelligent use of alcoholic beverages.

Crile has given us much food for thought in relation to the diseases peculiar to civilized man, such as arteriosclerosis, hyperthyroidism, peptic ulcer, diabetes, neurocirculatory asthenia and the like. If his thesis is correct (and the evidence now seems to be ample to support it), the basic cause of these disorders is an excess of pressure for activity, originating in the higher cerebral centers and imposed upon the various organs of the body through the autonomic nervous system and the adrenal glands. When these morbid conditions are far advanced, Crile has relieved or cured hundreds of patients by breaking the lines of communications permanently—adrenal denervation.

This operation is, however, a major surgical procedure, attended by some danger even in expert hands, and decidedly not to be undertaken by a tyro. It is, therefore, more or less a last resort, to be considered only when a patient is seriously incapacitated and milder measures have failed to produce the desired results.

Is it not possible that, in those milder cases of mental and nervous overstress, which are so common that every physician sees them daily, some remedy may be found which will partially and temporarily inhibit these stimuli from the higher centers and give the organism a longer or shorter period of surcease, during which it can recuperate from the evil effects of the psychic drive which is pushing it in the direction of incapacitating illness?

Granted such a possibility as this, it seems reasonable to believe that alcohol, in carefully regulated doses, may be the very means for accomplishing this purpose, since its first effects are to block, to some extent, the impulses originating in the higher centers and permit the individual to function, for a time, at a somewhat lower level, thus securing relaxation.

During the past generation or two, little real thought has been devoted to the physiologic, and especially the psychologic, effects

of alcohol, except by a few researchers, some of whom were emotionally biased. Reason has been subverted by feeling and by ideas of so-called morality, so that the whole subject has been enveloped in a fog of emotion, through which the facts, if any, have loomed, seductive or menacing, according to the natural or acquired slant of the individual's experience or training.

It appears that the time has come to approach the entire problem of the use of alcoholics in the dry, impersonal light of reason, undimmed by prejudices or pathologic appetites, and try to discover just what part, if any, these substances can and should play in the practice of medicine and in the individual and social life of the people. It seems entirely within the bounds of probability that such studies may demonstrate that, without the judicious and intelligent use of alcohol or of some hitherto undiscovered substitute for it, the progress, or even the survival, of such a civilization as ours may be impossible.

It is better to follow even the shadow of the best than to remain content with the worst. And those who would see wonderful things must often be ready to travel alone.—HENRY VAN DYKE.

Population and Medical Practice

IT is fairly obvious that the conditions of medical practice depend, to a considerable degree, upon the number of people in a given territory who require such service, and any forward-looking plans which are to be made along this line must include the factor of population increase.

Up to the World War, the population of the United States was increasing at the rate of about 1,800,000 a year, so that, twenty years ago, it was estimated that, by 1934, there would be 150,000,000 people in this country. But about 1924 this rate of increase began to diminish and now has fallen to about 800,000 a year; and our population is only 126,000,000.

It seems reasonably certain that our rate of population growth will continue to decline, so that, by 1940 or 1950 (which means in the immediate future), it will become stationary at about 130,000,000.

These larithmic statistics are the result of a somewhat complex set of conditions and contain more food for thought than is implied by the mere dislocation of former ideas regarding the actual numbers of people who will be prospective patients. They mean a shift in the type of patients as well.

In 1920, 40 percent of our people were less than twenty years old, and only 20 percent were over forty-five. On the basis of present trends, in another forty years, only 30 percent will be under twenty, and 35 percent will be over forty-five. That means that the demand for pediatricians will slowly but steadily decrease, while the need for geriatrists will increase in direct ratio.

If the people in general (and physicians especially) do not wake up soon and demand a more intelligent attitude in regard to birth-control laws, on the part of our legislators, another very disastrous change will be increasingly in evidence. The more intelligent classes are now practicing birth control and, unless we make it simple and easy for the underprivileged classes to obtain the necessary information along this line, there will be a serious falling off in the quality of our population, out of proportion to the decreased increment in quantity.

With less young people coming on, to be supported by their elders, their period of formal education will be lengthened and more of the world's work will be done by the middle-aged. This will mean that the general thought will grow more conservative and there will be less of the "booster" spirit.

All in all, it behooves all thoughtful persons to let their imaginations run a bit in these fertile fields of speculation, even though it may not make any very material difference in the daily lives of most of those who now bear the burden of caring for the sick. Other generations are coming on, and their lives will be strongly influenced by the things we do and the plans we make, today.

To succeed in great affairs, think early and often.
—WALTER B. PITKIN.

Enthusiasm and Joy

HAPPY is the man who loves his vocation. There is no joy quite comparable with that which abides in the heart of him who approaches those labors by which he earns his daily bread, with the same enthusiasm which animates the child embarking upon a day of self-chosen play.

In proportion as a man lacks this fine uplift, particularly if he has chosen no hobby in which he can find an anodyne for sorrow and forgetfulness of cares, and especially if he is a physician, he is to be pitied. The daily interruptions, sacrifices, responsibilities, unpleasantnesses and disappointments of a doctor's life must be well nigh unbearable

for those who do not and cannot feel that their ministry, with all its arduous duties, is the only life wholly worth leading—the natural and fully satisfying outlet for the expenditure of the God-given urge to fulfillment which is within them.

What hope is there for the doctor who has gone stale on his profession—who feels no quickening of the pulse at a difficult diagnosis accurately made or a life snatched away from the Lord of the Dark, and by his skill?

There is much hope, if he still possesses sincerity and will and the divine determination to have life more abundantly! The genuine "golf bug" is generally a man who consistently brings in scores in the eighties or lower. The duffer is rarely a true enthusiast, because there is no satisfaction quite in the same class that comes from exercising powers, knowledge, arts and skills which one has acquired by one's own efforts. The man who is "down on" his job or his profession is generally not "up on" it—he lacks the skill to carry on in a way which will raise his own self-confidence and command the respect and admiration of his associates and friends.

The dissatisfied, unhappy physician, barring domestic turmoil, personal bereavement or unavoidable economic disaster, which are generally the result of his own lack of thought or judgment or both, is the man who is not readily familiar with the science and art of his vocation—who lacks knowledge or skill or both, so that he fails to win victories, in

his constant warfare with death and disease, by the keenness of his vision and the power of his efforts.

There is a remedy for this distressingly common malady, this staleness, this ennui, this savorlessness of life. It resides in the acquirement of mastership of one's job; in gaining the knowledge and developing the skill which will enable one to *know* that he can solve knotty problems and meet difficult circumstances successfully.

There are no substitutes for these things—nothing "just as good." They cannot be given or bequeathed by another nor bought for money. The only coins with which they can be purchased are toil and sweat and patience and perseverance. Of these, every man has enough for his purpose, if he will but spend them.

Let those, who feel their eagerness and enthusiasm slipping, buckle on the armor of determination and set out to acquire those powers and faculties which will make them men who are sought after—leaders in their communities—for the loss of these qualities of interest, curiosity and zest spells senility, no matter at what age it occurs, and the octogenarian who possesses them is younger than the man of twenty-five who has lost them.

Knowledge is power; the exercise of a self-developed skill is joy; and these are the parents of enthusiasm, which can ward off the "slings and arrows of outrageous fortune" and conquer the world.



LEADING ARTICLES

Psychic Hygiene

By George B. Lake, M.D., Chicago, Ill.

WHEN most people use the term, mental, they connote something connected with the intellect—the thinking and reasoning powers. But since, in the vast majority of human beings, the intellect and the emotions are so inextricably entangled that it is difficult to say where one leaves off and the other begins, and since these two components or aspects of man's nature act and react upon each other in various and unexpected ways, it is more satisfactory to lump the two together and speak of the psychic nature, its control, direction and hygiene.

Psychic hygiene implies a number of things which may appear to be strictly physical, but most, if not all, of which have psychic connotations. Among such are good food, systematic work, suitable exercise, education in useful lines, etc. On the more strictly psychic side may be mentioned self discipline and temperance in all things, a sense of proportion and of responsibility, respect for the rights and feelings of others, and all those matters which we think of as characterizing adults, as distinguished from children. Psychic hygiene may then, perhaps, be defined tersely, as the condition or process of growing up, psychically, at the proper time.

Psychic health is the condition in which one lives and works with a reasonable degree of skill and pleasure and a minimum of strain and friction; mingles with one's fellows without undue shyness, jealousy or heartburnings; is free from hampering fears and regrets; has patience to await with equanimity the leisurely but inevitable processes of nature; escapes the Scylla of self-depreciation, without running afoul of the Charybdis of egocentricity; and meets each day with smiling eagerness, intent to extract from it every drop of the juice of experience, sweet or bitter, for the nourishment of the soul. It is, by its presence, absence or degree, the sum of all of the individual's successive reactions to his environment. Psychic hygiene is the road which leads to this desirable condition.

It should be clearly understood, early in this discussion, that psychic ill health has little or nothing to do with mental deficiency, as we ordinarily understand that term. It is a matter of psychic weakness or inefficiency—the psyche including both the mental and emotional faculties and their coordination and

harmonious functioning. A man may be an intellectual giant and, at the same time, a psychic cripple. A recent survey of several hundred members of the Phi Beta Kappa honor fraternity (supposed to be the intellectual cream of our college graduates) showed that eighty percent of them were psychically unstable.

Heredity and Environment

Many earnest students have, of late, been investigating the structure and functions of the mind (not, please note, of the brain, which is merely the mind's instrument of physical expression and has been studied for many years) and have come to the conclusion that environment is a far greater factor than heredity in shaping our psychic destinies.

Indeed, the older teaching, to the effect that mental diseases are transmissible by heredity, is now being rapidly replaced by the dictum that, if psychic disorders are more common among children of mentally diseased persons (which is not conclusively proved), it is because such children are likely to receive poor home instruction and guidance and to grow up in an atmosphere of shame and superstitious fear regarding the infirmities of their parents.

This does not mean that heredity as a factor in life has been thrown into the discard. Our parents have furnished us with the physical instruments upon which we must play the symphony of life; but *we must learn how to play them*. A Stradivarius, in the hands of a jazz player, will give forth nothing but jazz. In this process of learning, parents and teachers can be enormously helpful, if they know how.

The idea that mental traits and intellectual power are transmitted by heredity is now in process of going the way of other long-held superstitions. We can give our children, directly, the physical bricks and mortar out of which a healthy material and psychic life can be built, but we can confer physical and mental health upon them only by directing their activities with intelligence and teaching them to govern themselves; and this teaching can be done adequately only by those who have learned the lessons in their own lives.

When a man and woman decide that they will become ancestors, they should, before

embarking upon the complicated and responsible profession of parenthood, study its details and technic, as they would expect to prepare themselves for the practice of any other great profession, such as law, medicine or engineering. The surroundings of a child, from the time of its conception onward, are of vital importance, and no one can adjust these in the most effective manner by the light of some heaven-sent inspiration. The details of making these adjustments must be *learned*, by hard and extensive study.

The phrase, "decided to become ancestors," was not used at random. The accidental child is handicapped, from the start, by that fact. The definitely unwanted child has small chance of coming to a perfect understanding with his universe. In order that the world may be peopled by a race, thoroughly sound psychically, we must learn how to have children when we are ready for them, and only then.

Children are People

Most psychic ill health begins with ignorance, stupidity or selfishness on the part of parents. The statement that neurotics are made, not born, is true, with some minor reservations pertaining to defective germ plasma, discussion of which has no place in a consideration of psychic hygiene. One of the commonest ways in which neurotics are fabricated is by our failing to appreciate the fact that children are human souls, with individualities and characters of their own, which must be developed; not jugs into which we are to pour the same muddy brew of misinformation, superstition, prejudice and ill will which has filled our days, at best, with boredom and frustration; and, at worst, with despair and horror.

If all parents would strive to understand their children and play up to them, as they do to those adults whose favor they are eager to gain or hold, remembering that *children are people*, the problem would be half solved.

A child should be listened to with as much attention and respect as is accorded to his elders (or even more), and his opinions and suggestions should be weighed carefully. If he is right, he should be praised (but not fulsomely) for his cleverness or skill; if wrong, the fallacy of his position should be explained to him, gently and in words he can understand. He should early be taught and required to make decisions for himself and, when he has done so, he should not be protected from the results of those decisions, unless they would prove too utterly disastrous. Only so can the child grow in wisdom, by experiencing the natural effects of his acts.

The father may be a plumber or a minister and hate his job; or a doctor or a merchant and love it. But that is no reason why the son should or should not follow in his father's footsteps. The only light by which it is safe

to map out the path which a child is to follow, is the light which shines in that child's own mind and heart. When he has found that light and seen that path, his parents or guardians should assist him to follow it, whether or not it leads in the direction of their preconceived ideas.

The child who comes to maturity in an atmosphere of love, intelligent understanding, tolerance, courtesy, consideration for others, helpfulness and that kindly appreciation of the relative values of things, which we call a sense of humor, has an enormous advantage over those who have not been so fortunately situated.

Shortly stated, the only truly worthwhile thing that parents can give to their children is the ability to stand alone and to walk a clearly seen path with heads erect and a smile, interfering with no one, permitting no one to interfere with them unwarrantably, and undaunted by the vicissitudes of life.

Much space has here been devoted to laying the foundations for psychic health in childhood, for the reason that it is during the first ten years of life that the habits are formed which will largely determine whether the subsequent years will be filled with success and joy or with failure and misery, or whether they will bring the gray and tasteless sense of incompleteness, mediocrity and disappointment which, unfortunately, is the lot of so many.

Help for Adult Neurotics

But what of the adult who finds himself caught in the net of that maladjustment to his environment which we call psychic disease or a neurosis, or who simply feels the lack of that spiritual robustness which is best expressed by the German word *Lebenslust*, for which we have no English equivalent in word or phrase? If one is weak physically, there are systems of exercises which will build up the strength. Is there any similar help for those who are psychically weak? The answer is, yes.

If a case of psychic insufficiency is severe or far advanced, the services of a trained psychiatrist or psychotherapist may be needed, temporarily, to help the sufferer in getting a foothold on more solid ground, much as a man with a broken leg uses splints and crutches until the bone becomes strong again, and then lays them aside.

The chief factors in psychic infirmity or maladjustment are: Ignorance, fear, self-pity and other forms of selfishness, idleness and superstition, which last is merely overestimating the importance of trivial matters—the antithesis of a sense of humor.

Ignorance of physical laws kept our savage ancestors in a constant state of peril and terror. We have learned some things, but not very much, since their time. No one who has not a reasonably complete and satisfying

philosophy of life (there are many varieties, to suit all needs) and at least the rudiments of knowledge regarding the world on which we live and the universe of which it is a part, can be sure of permanent immunity against psychic disorders.

Fear is the child of ignorance and the greatest barrier to the achievement of happiness. It may be acute or chronic—generally the latter, under the name of worry—and fills the days of many unfortunate souls with forebodings and their nights with unrest.

"All fear," said a wise man, "is mean distrust of God." As we learn more of the laws of Nature, which are the physical expression of the Divine Life, and direct our lives in accordance with them, the rough places become smooth and the "terror that walketh in darkness" flees as the light grows brighter. The only antidote for ignorance and fear is knowledge, and that product of its use in one's life which we call wisdom.

Selfishness is the next great barrier to mental health, and shows itself in an almost infinite variety of ways. Here too, however, a general formula may be applied. The antidote for selfishness is an eager and kindly interest in other people, constantly fed and stimulated by *doing something for them*. I have never encountered a genuine lover of men, nor one with a real sense of humor, in a psychopathic hospital or clinic.

No man or woman can be wholly sound, psychically, who is not engaged in some form of creative activity. This may be anything, from the primitive and basic business of bearing and rearing children to the building of a cathedral, and includes an inexhaustible variety of occupations and interests. Happy is the man whose heart and mind are eagerly engaged in his vocation! Failing that, or in addition to it, every human being should have at least two avocations or hobbies—one physical, for the years of his youth, and the other emotional or mental, to carry him through his sunset decades—into which the individual can enter with energy, intelligence, sincerity and joy. Both should be chosen and developed as early as possible. The man or woman who is "killing time" is murdering most of life's hope for happiness.

In combating superstition, the strongest weapon is, once more, knowledge. The more we know, the better we can evaluate the relative importance of things and appreciate the fact that we are not the axis around which the world revolves. We also gain thus in the indispensable attribute of tolerance, for, as our horizon widens, we see that truth is approached by many pathways, among

which ours may be no better than another's.

Most people take themselves and their personal problems entirely too seriously. If we could laugh more (especially at ourselves), play more, relax more, we would be far happier and healthier, psychically. One humorous and clear-sighted student of human beings said, "We must keep limber and loving and a little bit looney." That statement will well repay some careful thought.

The physical weakling gets little enjoyment out of his material existence; but exercise will make him strong. The psychic weakling, too, can build up the muscles of his emotional and mental bodies by exercising them.

The emotional body is strengthened by such activities as the composing or interpreting of music; by the active practice of painting, sculpture, etching, potting or any other of the graphic or plastic arts; by imaginative writing, particularly of poetry; even, in less degree, by the study and intelligent appreciation of the work in these lines which has been done by others and of the wonders and beauties of the world about us.

The only true exercise for the mental body is thought—not the mere reading of the ideas of others, but the weaving of a set of premises into a conclusion of one's own. This is hard work, for those who are unaccustomed to it, but when the trick is once learned and the sinews of the mind begin to strengthen, it becomes the most exciting sport in the world.

Let us sum up the prime essentials for the attainment of a sound and robust psychic equipment. They are: A set of understanding and sympathetic parents, who will not try to fit a child upon the bed of Procrustes, but will treat him as a human being, inculcating self-discipline and a sense of personal independence and responsibility; the banishment of ignorance, fear and superstition by the gaining of knowledge and by *using it*, so that it becomes wisdom; the elimination of selfishness by developing a thoughtful, loving and helpful interest in others; the acquirement of a philosophy of life, a sense of humor, and a set of creative activities which can be pursued with enthusiasm; and, finally, the regular, daily exercise of the physical, emotional and mental vehicles of consciousness, so that they may become strong and flexible instruments for interpreting the world to us, and us to the world.

Such a program is enough to fill a human life to overflowing, but it is the only sure road to the attainment of that high goal set before us by the philosophers of old: *Mens sana in corpore sano*.

6 No. Clark St.

A Basic Formula for the Management of Any Inflammatory Disease

By Harry O. Nyvall, M.D., Chicago

ALL diseases can be divided in two groups: inflammatory and functional. The inflammatory diseases, which are the ones under discussion in this paper, are best divided into infectious and organic. The infectious group comprises the acute contagious diseases—lobar pneumonia, influenza, typhoid fever, tuberculosis, syphilis, gonorrhea, malaria, erysipelas, epidemic meningitis, anterior poliomyelitis, Malta fever, tropical and parasitic diseases, rabies, typhus fever, leprosy, and others. Under organic diseases may be listed gastritis, enteritis, appendicitis, nephritis, cystitis, orchitis, salpingitis, cholecystitis, tonsillitis, mastoiditis, pleurisy, arthritis, myositis, endocarditis, tuberculosis adenitis, ivy poisoning, carbuncles, and many others. Surgery plays a leading role in the organic diseases, especially in the chronic stage where such complications as pus formation, gangrene and obstruction develop.

The functional diseases, which make up the second group, compromise disturbances of the endocrine glands and of the sympathetic nervous system, diathesis, blood and deficiency diseases. In addition, there are certain diseases of inflammatory origin, such as mucous colitis, gastric ulcer, asthma, chorea, etc., and the skin diseases, such as psoriasis, pruritus, eczema, etc., which are better classified under the functional group. Although functional diseases will not be discussed at this time, nevertheless the basic formula will be equally adaptable to their treatment.

As disease is merely a nomenclature for a special pathosis of an organ or organs, caused by a specific or idiopathic agent, its signs and symptoms will be those of the afflicted organ. Diseases will differ from one another because of the site of the lesions, but they will have this in common, the general pathologic condition, with its signs and symptoms.

There are three stages of the general pathology of inflammatory diseases: acute, subacute and chronic. The signs and symptoms characterizing the acute stage will be active, such as pain, fever, redness, heat and swelling from cellular infiltration, serum exudation, and engorgement of small vessels. Ulceration may be a sequel.

The subacute stage, which is the intermediate stage, is that of convalescence. This stage is characterized by slight fever and tenderness of the swelling, which consists of cellular and fibrinous infiltration, and some vascular engorgement. Heat and redness may be present, but only mildly. This stage may terminate by absorption of the products of inflammation, or may pass into the chronic

stage, the signs and symptoms of which are passive. The swelling, if any, will be a fibrous, with some white-cell infiltration and sclerosis of the vessels. Fever, heat and redness are absent. There may be stiffness and tenderness on motion. Abscess formation or fibrosis may be the sequel.

The therapies used in the treatment of the inflammatory diseases will be the drugs administered externally, those given internally (including serums and vaccines) and physical therapy. The therapies will be classified according to their sedative, stimulative, alterative or specific action, so as to make it easier to pick out the one to fit the particular stage of the pathosis. The sedative drugs are used in the acute stage, for their astringent and absorbing effect on the products of inflammation, and for their mitigating effects on the active signs and symptoms. The stimulative therapies are used in the chronic stage, for their lytic and dissolving effects on the lesions and their exciting effects on the passive signs and symptoms. The alteratives are used for their nutrient and tonic effects on the body; and the specific therapies for their curative and destructive effects on the etiology of the disease.

The course of treatment in any disease must include both systemic and local measures. Chief among these will be the internal medicines, while the external drugs and physical therapy serve as adjuncts.

Systemic Treatment

The therapies used in the systemic treatment are for the purpose of supporting the body's resistance against disease and restoring it to normal once disease has invaded it. This will be accomplished through the elimination of waste products, the detoxication of faulty products of metabolism, the alteratives, and foods or diet.

The elimination of waste products is accomplished by means of sudorifics, such as salicylates, autocondensation, wet packs and baths; by diuretics, such as the acetates, citrates and caffeine; and by cathartics, such as calomel, salines, cascara, phenolphthalein, enemas, bile salts and oils.

The detoxication of the faulty products of metabolism is brought about by the use of aseptic foods, the starch products, fruits, vegetables and their juices, mineral waters, and through such antiseptic medicines as salol, ox bile, colchicum, kaolin, hepatic extract (Anabolin, for example) and *Bacillus acidophilus*.

The alteratives are the so-called tonics,

which exert an alterative effect on the blood, nerves and appetite. They are prescribed especially in the subacute and chronic stages. Dextrose with calcium chloride or Glucocalcium is used as a nutrient in the acute stage, especially in the presence of anorexia or emesis, and to combat acidosis. Elixir of iron, quinine and strychnine is a good stomachic. Glycero-phosphate compound or syrup of hypophosphite compound is preferably given in the subacute stage; while syrup of phosphate compound is best given in the chronic stage.

The foods are given in diets, which vary according to the stage of the disease. A liquid or semi-solid diet is usually ordered in the acute stage; a soft diet in the subacute; and a general diet in the chronic stage. The foods are also used for their effects on the acidity of the stomach and the motility of the intestine and, in certain conditions, as special diets. Fats, starches and bland foodstuffs will lessen gastric secretion, while the peptogenic foods increase it. The cellulose and fibrous foods and fruits are laxative in action. The special diets include the salt-free and non-protein diets used in cardiorenal diseases, and the liquid, bland and antacid foods, used in gastritis and ulcers of the stomach.

Local Treatment

The therapies used in local treatment are palliative measures, basic drugs and specific remedies. The local treatment deals with the particular disease itself; that is, with its pathology, etiology, signs and symptoms.

Palliative measures, because of their sedative and stimulative action, deal with the local signs and symptoms. They consist of physical therapy and the external and internal use of drugs. The physical agencies are the positive polar action and the cathaphoresis of the galvanic current, cold moist applications, ice packs, and x-rays. They are used for their astringent and depletive effects on the hyperemia and hyperplasia of the local disturbance. There are also the infrared rays, diathermy, negative galvanism, the vibratory coil, and hot moist applications, which are used for their congestive effects on the atrophic and fibrous tissue changes of the afflicted organ.

Drugs are used externally for their palliative, antiseptic and caustic effects on the skin and mucous membranes. The *sedative preparations*, such as calamine lotion, with or without phenol; nasal oil drops with ephedrine; aural drops with phenol; zinc oxide ointment; etc., and the dusting powders, are used for their astringent, emollient, protective, antipruritic and anesthetic effects, in such lesions as acute erythemas, acute inflammatory edemas, acute exudations and acute ulcerations. The *stimulative preparations*, such as Iodex with methyl salicylate, baume Bengué and Karolysin ointment, are used for their counterirritant, lytic and keratolytic ef-

fects, in such chronic conditions as ulcers, arthritis, neuritis and other fibroses. *Antiseptic preparations*, such as sulphur or mercuriated ointments, calamine lotion with phenol, tincture of Metaphen, Merthiolate solutions, tincture of iodine, weak aqueous solutions of potassium permanganate, copper or boric acid, are used, for their bactericidal and antiseptic effects, on pustules, furuncles, carbuncles, septic wounds and discharges. The *caustic drugs*, such as the silver nitrate stick or the fifty to seventy-five percent silver nitrate solution, are used for their destructive effects and for the formation of a protective coagulum in such lesions as ulcers.

Internal Treatment

Drugs given internally include palliative and basic drugs, and specific remedies. They play the principal part in local treatment, and therefore in the treatment of the disease. The palliative sedative drugs are used to abort, alleviate or inhibit the active signs or symptoms of hyperfunctioning glands, muscles and nerves. They are: (1) codeine, morphine, etc.—the central analgesics; (2) Pantopon, which relieves colic of the gallbladder, gut, ureters, etc.; (3) hyosine, atropine, belladonna and ephedrine, which are antispasmodics and check secretions; (4) barbital and its derivatives. (Luminal, Allonal, Nembutal, Neonol, Allurate, Amytal, Sodium-luminal, etc.), are nerve sedatives and hypnotics; (5) salicylates, antipyrine, etc., are antipyretics and inflammatory analgesics; (6) nitrates are vasomotor dilators; (7) digitalis, a cardiac sedative; (8) hepatic and pancreatic extracts are used as vasomotor sedatives in hypertension.

The stimulative palliative drugs are used to excite and increase the passive signs and symptoms of the hypofunctioning glands, muscles and nerves. They are: (1) Adrenalin (epinephrin) and pituitary extract, employed in vasomotor failure; (2) Coramine or alpha lobelin, in respiratory and cardiac failure; (3) caffeine and digitalis, in renal failure; (4) ammonium chloride, an expectorant; (5) caffeine, a psychic stimulant; (6) strychnine and epinephrin, sympathetic stimulants.

Specific remedies are used for their curative effects on the causative agents. They are the bactericidal drugs, serums and immunizing vaccines. The bactericidal drugs are: (1) sodium guaiacol sulphonate, for respiratory diseases and bacteremia; (2) methenamine, for genito-urinary diseases; (3) sodium salicylate, for rheumatic diseases; (4) quinine dihydrochloride, for malaria; (5) mercuric iodide, mercuric cyanide, mercurosalicylate, bismuth salts, neoarsphenamine, etc., for syphilis; (6) mercuric cyanide, for tuberculous adenitis, Hodgkin's disease, etc.; (7) Carbarsone and emetine, for amebic dysentery; (8) digitalis, for auricular fibrillation; (9) serums, for diphtheria, tetanus, epidemic

meningitis, scarlet fever, etc.; (10) preventive or prophylactic vaccines for diphtheria, typhoid fever, scarlet fever, smallpox, etc.

The basic drugs form the nucleus in the prescribing of various medicines. They are used in the treatment of diseases because of their absorbing and dissolving effects on the products of inflammation. The basic drugs used in the acute stage are a combination of a calcium salt, because of its astringent or absorbing effect on inflammatory edema and cellular elements; parathyroid extract, for its calcemic effects; and sodium salicylate, for its antipyretic effects. In the chronic stage, a combination of sodium iodide, for its lytic or dissolving effects on fibrous infiltration, and an autogenous vaccine, to produce leucocytosis and form antibodies; and in the sub-acute stage, a combination of a calcium salt, sodium iodide and a small dose of parathyroid extract.

Therapeutic Formulas

The treatment of diseases will be more simply and effectively accomplished if we combine our selected therapies into some sort of formula. This formula will be known as the basic formula, and should include the basic drugs, one or more palliative drugs, an alterative and the specific remedy to suit the particular stage of the pathosis. For instance, in the treatment of the acute stage, the formula will include a calcium salt and parathyroid extract, for the basic drugs; sodium salicylate and codeine or a barbiturate, for sedative palliatives; syrup hypophosphite simplex or dextrose, for the alterative; and sodium guaiacol sulphonate or methenamine or a specific antitoxic serum, for the specific remedy.

In the chronic stage, the formula will include sodium iodide and vaccine, for the basic drugs; ammonium chloride or caffeine or strychnine, for the stimulative palliatives; syrup phosphate compound or sodium cacodylate for the alterative.

The results to be obtained by the use of the drugs in the basic formula will depend on the method of administration. For the best results, the combination of calcium chloride or gluconate, dextrose or glycerophosphate compound, and one of the bactericidal drugs, such as sodium salicylate, methenamine, etc., or the combination of sodium iodide, sodium cacodylate and one of the bactericidal drugs, is given intravenously, while the parathyroid extract or the vaccine is given subcutaneously.

Where the specific remedy, such as neoarsphenamine, is incompatible with the suggested combinations of basic and alterative drugs, it should be given intravenously; and where the specific remedy, such as serum or bismuth salts, is incompatible for intravenous injection, it should be administered subcutaneously. Then the calcium salt, in the

form of the gluconate or in the preparation of syrup of hypophosphite compound or the elixir of glycerophosphate compound or the combination of sodium iodide or syrup of ferric iodide and syrup of phosphate compound, should be given orally. Parathyroid extract and vaccines are given subcutaneously. The palliative drugs are usually incorporated in the oral medication, but for emergency purposes they may be given subcutaneously. Sodium salicylate, in combination with calcium gluconate, dextrose or glycerophosphate compound, may be given intravenously for palliative purposes.

The application of the basic formula in the treatment of the inflammatory diseases will be illustrated by the treatment of one of these diseases. I have purposely selected articular rheumatic fever because of its perceptible three stages and its etiology being specific, due to the streptococcus. The treatment will be systemic and local, and it is in the latter where the basic formula comes into prominence.

Rheumatic Fever

The acute stage of articular rheumatic fever is characterized by fever and tender, painful, red and swollen joint or joints. The swelling is due to the exudation of serum, the infiltration of cellular elements, especially the red cells, and engorged small blood vessels.

The *systemic* treatment will include:

1.—The diet, which will be at first, liquid and then a semisolid, with mineral waters, fruits, vegetables and their juices, together with two capsules of halibut-liver oil, containing vitamins A and D, given once daily.

2.—The cathartics, in the form of an initial dose of calomel, followed in from four to six hours with a saline, and subsequently a saline before breakfast, as indicated.

3.—The alterative may be 10 to 20 cc. of dextrose, if anorexia or enuresis is present.

The *local treatment* is directed to the afflicted joint and will consist of:

1.—The *sedative palliatives*, such as:

A.—Codeine phosphate or Cibalga, for the pain.

B.—Sodium salicylate, for fever and pain.

C.—Cold, wet applications of witch hazel or epsom salts to the joint.

2.—The *basic drugs* are used to absorb the products of inflammation:

A.—Calcium gluconate.

B.—Parathyroid extract.

3.—The *specific remedy* will be:

A.—Sodium salicylate and potassium guaiacol sulphonate, in the form of Calciol or syrup of Thicol.

The *choice of administration* will be:

1.—One 10 cc. ampule of calcium gluconate or Calciol; 10 cc. of dextrose solution and 10 cc. sodium salicylate solution (30 grains) are given together, intravenously, once or twice daily until the temperature declines to 99° F.

2.—Daily intramuscular injections of 1 cc. of parathyroid extract until the temperature declines to 99° F.

3.—Codeine or some other analgesic may be given orally; but for quick effects the hypodermic injection is preferable.

4.—In place of the intravenous injection above indicated, the following may be prescribed:

R Codeine phosphate.....gr. ii — 0.13
 Calcium gluconate.....dr. iv— 16.00
 Sodium salicylate.....dr. iv— 16.00
 (or pot. guaiacol sulpho-
 nate, dr. iv)
 Glycerinedr. iv— 16.00
 Aq. menth. piperitae.....oz. i — 32.00
 Essence of pepsin qs. ad.....oz. vi—180.00

M et Sig: Two teaspoonfuls
 after meals and at bed-
 time, in water.

The *subacute stage* is characterized by slight fever or none, with soft, pale swelling of the joint, which may be tender on motion or manipulation. The swelling consists of a few red cells, few engorged small vessels, little if any serum, and an increased amount of fibrin and white cells.

The *systemic treatment* will be:

1.—The diet will be, at first, semi-solid and later general, but low in proteins, continuing with the mineral waters, fruits and vegetables and their juices, and the halibut-liver oil.

2.—The *cathartics* will be a saline, given as needed before breakfast, and one or two bile-salt tablets, such as Taurocol or Veracolate, at bedtime.

3.—An *alterative* may be given, either

- A.—5 cc. glycerophosphate compound, or
- B.—Syrup hypophosphite compound, or
 elixir of glycerophosphate compound.

The *local treatment* will consist of:

1.—Stimulative palliatives, such as:

- A.—Diathermy and mild vibration, or gentle massage to the afflicted joint.
- B.—Local application of baume Bengué or Iodex with salicylate ointment.

2.—The *basic drugs* are:

- A.—Calcium gluconate or Calcicol.
- B.—Sodium iodide or sodium-guaiacol
 iodide compound.
- C.—Parathyroid extract.

3.—The *specific remedy* will be:

- A.—Sodium salicylate, and
- B.—Sodium guaiacol compound in place
 of sodium iodide.

The *choice of administration*.

1.—The combination of 10 cc. of calcium gluconate, 10 cc. ampule of sodium salicylate (20 grains), 10 cc. of sodium guaiacol compound, and 5 cc. of glycerophosphate compound are given intravenously three times a week, for a period of two to four weeks.

2.—One-half (0.5) to 1 cc. of parathyroid extract, given intramuscularly three times a week.

3.—In place of the intravenous injection one may prescribe, for oral administration:

R Sodium salicylate.....dr. iii— 12.00
 Syr. ferric iodide.....dr. iv— 16.00
 Syr. Thiocol (pot. guai-
 acol sulphonate).....oz. i — 30.00
 Aq. menth. pip.....oz. i — 30.00
 Syr. hypophosphite comp.
 qs. ad.....oz. vi—180.00

M et Sig: Two teaspoonfuls after meals
 and at bedtime.

The chronic stage is characterized by a normal or subnormal temperature and a pale, cold, stiff, enlarged joint. The swelling will consist of an abundance of fibrous or connective tissue, many white cells and thickened or sclerotic small vessels.

The *systemic treatment* will be:

1.—The *diet*, which will be general plus mineral waters, fruits and vegetables and their juices, and a preparation containing vitamin B, for anorexia, as Lilly's Lextron or Harris' brewers' yeast.

2.—The *cathartics* will be compound bile salt tablets, at bedtime, and a saline as indicated.

3.—For *detoxication* of the intestinal tract one may give brewers' yeast, bacillus acidophilus or ox bile.

4.—The *alterative* may be sodium cacodylate, syrup phosphate compound with Fowler's solution, or liver extract.

The *local treatment* will consist of the stimulative palliatives, such as diathermy or ionization (preferable) and forceful manipulation of the joint and deep vibration.

1.—The *basic drugs* will be the combination of sodium iodide, with or without sodium guaiacol iodide compound, and vaccines.

2.—The *specific remedy* will be sodium salicylate and sodium guaiacol iodide compound.

The *choice of treatment*:

1.—Intravenous injection of the combination of a 10 cc. ampule of sodium salicylate (20 grains); sodium guaiacol compound, a 10 cc. ampule; and a 10 cc. ampule of sodium cacodylate (7 grains), given twice a week for a period of two to three months.

2.—Twice-weekly injections of the vaccine, in graduated progressive doses.

3.—If anemia is present, one may inject 1 cc. of liver extract, with the vaccine.

4.—In place of the intravenous injection one may prescribe:

R Sodium salicylate.....dr. iii— 12.00
 Syr. ferric iodide.....dr. iv— 16.00
 (or syr. Thiocol—pot.
 guaiacol sulphonate, oz.
 1—30.00)
 Aq. meth. piperite.....oz. i — 30.00
 Syr. phosphate comp. qs.
 adoz. vi—180.00

M et Sig: Two teaspoonfuls after meals
 and at bed time, in water.

The results that are to be expected from

the adoption of the basic formula in the treatment of the inflammatory diseases are that the prognosis will be good, the recovery period curtailed, the symptoms mitigated and the disease, in many instances, aborted, because the causative agent will be eradicated and the products of the inflammation will be more quickly dissolved and absorbed.

The treatment of diseases would be easier, simpler and more effective if we would classify them into functional or inflammatory, and the inflammatory into the infectious or or-

ganic; if we would regard the disease in the light of its general pathology, with its acute, subacute and chronic stages, and with its signs and symptoms of being active or passive; if we would classify all medicines according to their sedative, stimulative, alterative or specific action; and if we would, in the treatment of disease, adopt the basic formula which should include the basic drugs, the palliative drugs, the alteratives, and specific remedies.

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Extensive Effusive Pericarditis

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LITTLE progress has been made during the past century in our knowledge of the diagnosis and treatment of diseases of the pericardium. This is the more remarkable when one recalls the rapid advances made in the methods of diagnosis and prognosis of diseases of the myocardium and endocardium, resulting from the introduction of graphic methods. The probable reason why more time and attention are given to the latter is because, in such cases, the inflammation begins in the outer or the inner lining (pericardium or endocardium) or in the coronary arteries which nourish the heart muscle, and the myocardium sooner or later then becomes involved, resulting in development of a pancarditis, which is easily recognizable.

Etiology of Effusive Pericarditis

Effusions into the pericardial sac are the result of bacterial or toxic action and may follow inflammation, due to a great variety of causes. Acute effusive pericarditis is much more common in younger than in older people; more in males than in females; and always a secondary disease to: (1) Acute rheumatic fever, especially in children; (2) tuberculous pericarditis; (3) bacterial infection (staphylococcus, pneumococcus, influenza, streptococcus, tuberculosis, typhoid); (4) septic process anywhere in the body (scarlet fever, erysipelas, diphtheria, septicemia, pyemia); (5) pneumonia (especially if on the left side); (6) extension of contiguous inflammation from the pleura, heart, spinal column, esophagus or mediastinum; (7) injuries to the pericardial area; (8) as a terminal event in chronic diseases (renal disease, tuberculosis, cancer, arteriosclerosis, diabetes).

Pathology

At the beginning of an attack, the pericardial serous membrane, normally smooth, soft, glistening, well lubricated and velvety, shows patchy areas of opacity and becomes dry and

harsh from the hyperemia and arrested secretion. Exudation of fibrin gives the pericardial surfaces a peculiarly shaggy or "bread and butter sandwich" appearance. The process may stop at this stage, forming the dry or plastic type of pericarditis. Much oftener it goes on to the next stage, with effusion of serous or sero-fibrinous fluid, absorption of which results in slight and sometimes extensive adhesions, which may permanently impair the cardiac action. In almost all cases the myocardium shares in the inflammatory changes and is, itself, sometimes profoundly affected.

Clinical History

The case here presented is that of a boy 11 years of age who, after becoming overheated and perspiring freely from a game of football, drank several glasses of cold water, becoming quite ill immediately thereafter.

At first he developed chills, followed by a temperature of 103°F.; then severe pain over the precordial region, accompanied by a slightly dry, unproductive cough. The precordial pain was aggravated on full inspiration, on coughing and on changing position. This pain radiated to the epigastric region, giving the erroneous impression, to his parents, that the drinking of cold water was the cause of the trouble.

The parents gave the child hot abdominal applications and a large dose of castor oil. No improvement resulting, the family physician was called, who diagnosed the case as pleurisy, with probable broncho-pneumonia. There was little, if any, improvement due to the prescribed treatment.

The parents, however, observed the following changes in the boy's condition: (1) He began to lose weight rapidly; (2) became quite anemic; (3) lost his appetite; (4) had difficulty in breathing; (5) had a rapid heart

beat; (6) became quite nervous and irritable.

There being no improvement for several days and the family physician, being stricken with illness, I was called in, the boy having been ill for a month when I first saw him.

He was then anemic, emaciated, quite irritable and had a temperature of 104°F., pulse 140, and respiration 50, though he did not lie in bed. He was quite an intelligent little fellow and, because he felt a choking sensation whenever he lay down, he attempted to discover some better position to relieve his pain, finding it in standing in a forward bent position, with both arms stretched out in front in a slightly curved manner, thus compressing the lungs and allowing the heart more space.

His ribs on the right side were more prominent and the intercostal spaces were narrower than on the left side. The left nipple was lifted up by precordial and epigastric fullness. He was very orthopneic and suffered with a characteristic short, dry, hacking cough, aggravating the pain. On breathing, there was a depression of the left supraclavicular space and a sagging down of the entire right side of the chest. The rest of the body was rather emaciated, but there was no swelling of the ankles.

On palpation, the apex beat could not be localized and no heartbeats were noticeable except a rebound sound, similar to Braxton Hicks' contraction, especially on deep breathing. Friction fremitus was not elicited, except for tender spots along the left sternal margin, on either side of the ensiform cartilage.

On percussion, the dulness at the base of the heart was increased upward to the second interspaces on both sides of the sternum. The dulness of the right side extended downward from the second intercostal space, about one inch to the right of the right sternal border, fusing with the liver dulness about 2½ inches to the right of the lower right sternal border, obliterating the cardio-hepatic angle. Rotch's sign (dulness on percussion of the right fifth intercostal space) was positive. On the left side, the dulness spread more horizontally to the left, so that the lower border of the heart filled up the lower two-thirds of the chest cavity, with a bulging and greatly displaced liver dulness below.

Auscultation showed absence of a friction rub. A muffled and distant apex beat was diminished in intensity, with the disappearance of the second sound. There was a post-pericardial patch of tubular breathing below the angle of the scapula, the size of a

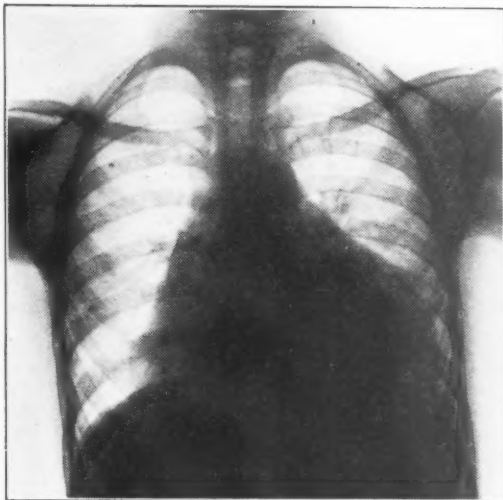


Fig. 1

silver dollar. The pulse was of good quality, as compared with the muffled apex beat.

The blood pressure was sub-normal.

Fluoroscopic examination of the chest (See Fig. 1) revealed a very large heart, much more to the left than the right, with no visualized heart contractions. The lack of contractions, more than the heart contour, suggests pericarditis with effusion.

Diagnosis

It can hardly be said that much progress has been made in the diagnosis of pericardial effusion in recent years. The condition with which it is most often confused and from which it is most difficult to distinguish it, is a large, dilated heart. Reports published from various clinics tell the same story. Effusions are much oftener found at the post-mortem table than in the hospital wards. Its occurrence in rheumatic fever, septicemia, pneumonia, tuberculosis and chronic diseases should not be overlooked.

The following subjective and objective symptoms are found:

- 1.—Dyspnea.
- 2.—Precordial pain.
- 3.—Anxious face.
- 4.—Rapid, small pulse.
- 5.—Pulsus paradoxus.
- 6.—Pressure symptoms:
 - A.—Dysphagia.
 - B.—Aphonia.
 - C.—Venous engorgement of the neck.
- 7.—Bulging precordia.
- 8.—Obliterated cardiac impulse.
- 9.—Muffled heart sound.
- 10.—Rapidly increased cardiac dulness, assuming a triangular shape.
- 11.—Obliteration of the cardio-hepatic angle.

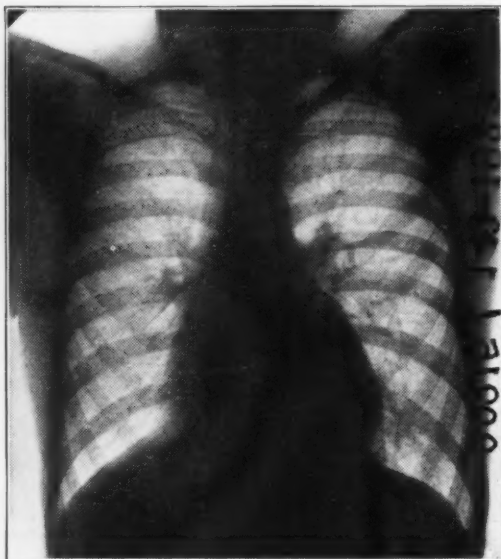


Fig. 2

- 12.—Ewart's positive sign (undue prominence of the sternal end of the first rib.)
- 13.—Roentgen-ray findings.
- 14.—Paracentesis, revealing fluid.

Medical Treatment

Absolute rest in bed is imperative. No visitors should be allowed. Anything that increases the heart beat increases the irritation of the inflamed surfaces of the pericardium. The etiologic factor must be sought and treated.

When the inflammation occurs as a complication of acute rheumatism, it has been suggested that large doses of salicylates be used. However, large doses of salicylates depress the heart. It thus becomes a matter of choosing between two evils, for the pericarditis is a result of the rheumatism. Consequently, even if the heart is depressed, if the salicylates are helping the rheumatism and thus the pericarditis, they should be used, though judiciously, of course.

Alkalies, such as citro-carbonate, citrate of soda, or in other forms, may be given freely. Diminishing alkalinity of the blood increases an inflammatory condition, and increasing the alkalinity diminishes inflammation.

An ice bag may be applied, though this should not be too heavy, as the patient often cannot stand pressure over the pericardium. Such local treatment often relieves pain and brings about a diminution of the number of the heart beats, thus assisting in lessening inflammation.

A light diet should be prescribed, only a

small amount of food being taken at a time, and such purging as the patient's strength will allow. These measures are essential in attempting to reduce the seriousness or amount of the inflammation and effusion. Saline purges are best employed if the heart is strong. If the circulation is weak, vegetable purgatives or calomel may be used.

For diuresis, potassium citrate acts well.

For pain, morphine or other sedatives may be employed.

Digitalis is indicated when the heart is rapid and feeble, with attending cyanosis and dropsy, or in cases of nervous irritability, palpitation and tachycardia.

To prevent exudation and hasten reabsorption of the exudates, purging, diuresis and local blistering may be tried.

Saturated solution of potassium iodide may be prescribed, with benefit in some cases.

The intake of fluids should be decreased, but a nutritious diet should be maintained.

For anemia, cacodylate of sodium, given hypodermically, may be attempted every day, for 5 to 10 doses; then every other day, continuing for two weeks.

In spite of this treatment, the pericardium, in this case, became more distended and the heart action more labored, so that paracentesis was decided upon.

Pericardicentesis

Aspiration of the pericardial sac is a procedure about which considerable controversy has taken place. Should paracentesis be done at all? And if so, what approach is best?

In all effusions into the pericardium, the heart is apt to lie close to the anterior chest wall. This is true of that part of the heart that lies immediately under the "triangle of safety," so that a needle thrust directly through the pericardium in this area would be apt to injure the heart, unless great caution is used. It is very difficult to say, in any given case, that the heart is not adherent to the pericardium, though in large effusions the pericardium is pushed away from the heart for a considerable distance on both the right and the left sides.

There are numerous points or regions of the pericardium which may be selected for performing paracentesis, but there is no single point of preselection. A suitable point must be selected in each case. If the needle is thrust slowly inward, engagement of the point into the adherent pericardium or heart muscle will manifest itself at once by the movement of the needle.

The aspirating point in the case under discussion was the lower fifth intercostal space, close to the sternum, because of the extensive effusion which was shown by the fluoroscopic and roentgenologic examination. The apex of the heart was pushed upwards and liver dullness displaced downwards and, because the apex of the heart is thick and the ventricles do not extend to this point, paracentesis was performed with safety.

After the patient was surgically prepared and placed in a comfortable position, a skin incision $\frac{1}{4}$ inch long was made, under a local anesthetic of 0.5 percent procaine solution; then gently inserting the needle, by pointing downward, backward and slightly inward, the fluid was withdrawn slowly, the pulse being carefully watched. About 600 cc. of fluid was withdrawn, of specific gravity 1.015, containing lymphocytes, polymorphonuclear neutrophils and endothelial cells; no bacteria or pus was present.

Post-Operative Treatment

The patient was kept in bed, with an ice bag over the heart, and watched carefully for signs of reaccumulation of fluid. The cough and precordial pain disappeared and the patient became more comfortable. As his appetite improved, he asked for more food

and slept with greater comfort. Neoferrum was given as a tonic.

Soon after aspiration, a roentgenogram was taken showing the disappearance of the fluid and the heart shadows within practically normal limits (See Fig. 2). The apex beat became visible and the heart sounds quite distinctly heard. No murmurs were elicited. The patient was kept in the hospital for two weeks and then sent home for continued treatment.

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Non-Narcotic Addictions

By Clarence King, M.D., Franklinville, N. Y.

OUR modern society includes a great number of addicts other than the "dope" users. These latter are a well recognized and unfortunate class; but while they are many, they constitute only a small percentage of the whole. We are not concerned with them at this time, but with the larger majority of addicts, which includes most of us in one class, if not in two or more.

To be an addict is to take some substance of a more or less deleterious nature into the body, generally in small quantities and at frequent intervals, until it becomes a habit difficult to break and almost necessary to the person's comfort and well-being. This may not be a perfect definition, but it will answer our purpose. There are four principal substances thus used, although there are others used to a lesser extent or peculiar to certain persons.

Alcohol

The first is alcohol. In some form this has been known as a beverage from earliest antiquity, and has come down to us with all its enticing and ensnaring allurements. It is not found in nature, but is always the result of chemical activity which closely resembles putrefaction, in a saccharine vegetable substance. It is never used clear as a

beverage, or even greatly diluted with water, except by hardened sots or those almost crazy for an intoxicant and unable to get one less poisonous. But in varying degrees of dilution it is an ingredient of a large number of beverages, without which they would be devoid of their popularity.

There has always been a diversity of opinion as to the real value of these beverages, aside from their convivial and social qualities. Those addicted to them profess to receive benefit, and there is probably no question but that, in small amounts, they give rise to a feeling of comfort and exhilaration of spirits for a short time. But the greater value, as their users prize them, undoubtedly comes from the satisfaction they afford the taste. Some of these people seek to justify their indulgence still further by attributing to alcohol, as such, a medicinal or food value. Whether or not it has any value, either in health or disease, is a mooted question that has been argued for generations, and is as far from a final settlement as ever. The weight of opinion seems to be that, in a few conditions, it may be advantageously used in moderate quantities, but that the indications are not often met with. Many doctors are discarding it entirely, except as a solvent or a preservative. Its food value, if any, must be small,

notwithstanding a popular endorsement by some people.

But addicts drink liquors, not because of any fancied physiologic benefits they may obtain, but solely because they like them. These beverages taste good to them and they feel good for the time being; and they are willing to endure whatever disagreeable after-results may come for the sake of experiencing the pleasant primary effects. These beverages quicken the emotional activity by depressing the sympathetic nerve centers, and induce a temporary feeling of wellbeing and a pronounced indifference to other matters or conditions.

Futhermore, alcoholics quicken the pulse, but without materially strengthening the heart; and they congest the digestive tract beyond its needs or wellbeing. In this way they predispose to digestive disorders, as we see in chronic drunkards. They also decrease resistance to extremes of heat and cold and greatly impair the power of prolonged or severe muscular exertion. These last-mentioned facts are well recognized by travelers or explorers in torrid or frigid regions and in the training of athletes.

Since the automobile has become the common vehicle of conveyance and our highways are crowded with young and reckless drivers, another effect of alcoholic drinks has come into importance. This is the delayed volition and tardy response of muscles to nerve stimulus in alcoholic addicts, which may, in an emergency, make the difference between safety and severe accident. There are times when the fraction of a second is the deciding factor and life or death may hang in the balance. Fortunately, many of the most habitual wine, ale and champagne addicts, on our most congested streets do not drive their own cars but employ hired chauffeurs, whom they are careful to keep sober.

But with the return of beer and the facility with which it can be obtained, the great number of beer addicts has become a menace to be taken into account. From the driving standpoint, a single glass of the 3.2 percent product would not be likely to cause much danger to the ability of the average person, unless repeated too soon or supplemented by something stronger. But already the demand for a higher content has gone out and is being supplied; while a moderate indulgence in the milder brew is enough to make drivers reckless and befog their judgment.

But again, the alcoholic addict is taking other chances, aside from accident. It is well known that these users, even those addicted to the lighter and better refined wines and champagnes, are facing dangers of their own. Possibly these are exaggerated by some, but they are certainly minimized or overlooked by others. If alcohol does not

cause impaired health in every one who uses it, it does become a serious complication in disease—and we are all liable to sickness. In pneumonia, nephritis, gout, diseases of the liver, certain mental and nervous diseases and urethritis, it adds extra dangers which retard recovery or, in some cases, make it impossible. In fact, there are few diseases in which we can entirely ignore it; and it becomes more serious according to the amount used, the duration of the habit and the proximity of the indulgence.

It has long been observed that beer addicts are prone to take on fat; and this has been cited as proof of its nutritional value. But since obesity has become recognized as a disease, that claim is not being heralded so loudly as it was. The efficient health commissioner of a large city has recently stated that beer does not cause this excess deposit of fat, but that, being a bitter tonic, it stimulates the appetite and that overeating causes the obesity. Apparently he repudiates the food-value claim, but clings to the other horn of his dilemma. He gives it an important place as a source of hemoglobin; and if that claim is substantiated (or even without it), it may become a popular home remedy for anemia or fancied anemia.

Elsewhere I have suggested that alcohol may induce an endocrine imbalance and that the deposits of fat which result are a true pituitary obesity. Be that as it may, obesity is a penalty many beer drinkers have to pay for their indulgence, and this becomes a menace to a long or comfortable life. Whether the fat comes from the food or directly from the beer is immaterial.

Coffee and Tea

But if we have a drink or beverage which can reasonably be called a national drink, it is not alcohol nor any of the so-called soft drinks dispensed at the bars or soda fountains. It is the two drinks (which may be considered as one) that are found in every home and to which most of us are addicts. Coffee and tea are table beverages in every rank and station of society and in every nook and hamlet of the land. They are both refreshing to a tired body and exhausted nerves. They perk up an overwrought mind and bring a feeling of comfort and relaxation to those under high mental or physical strain. Not much can be said against them, unless, of course, they are used immoderately; but they are sometimes so used. Coffee contains caffeine, which is a cardiac stimulant, and tea a substance nearly identical with it chemically. Neither of them should be given to children or young people, on the theory that a stimulant, when not indicated, is positively harmful. No one would think of giving digitalin (another heart stimulant) to a child unless there was an indication for it. But in

advanced age, when the heart muscle has begun to deteriorate, they may be of benefit. In excessive amounts, used for a long time, they decrease the desire for food and, in that way, tend toward innutrition; and either of them may derange digestion, tea especially, on account of the tannic acid which it also contains. I have had many cases of excessive tea drinkers among women. I recall one instance of a mother and daughter, each of whom drank twenty to forty cups daily and ate little food. They never prepared a meal when the husband and father was away, even for a prolonged absence. They were both extremely nervous and poorly nourished.

Coffee is supposed to be harmful in hypertension, but it probably can never produce it. Hypertension is not well understood and there are undoubtedly several factors concerned in it. Probably there is a sclerosis somewhere (perhaps localized) or early nephritis. It is well to discontinue coffee in these cases. This beverage sometimes produces distress in the stomach, hyperchlorhydria or nausea; and, with some late diners, it may give rise to insomnia or disturbing dreams. With other people, if they are unaccustomed to it and take it in large amounts it may cause vertigo.

I have thought that these beverages, especially tea, were injurious in certain skin diseases, at least those of a pruritic nature, and I advise against them along with rich foods and condiments. Most of such patients who come to my office are addicts to one or both of these drinks.

Tobacco

The use of tobacco is a more common addiction than alcohol, but it is not so harmful to health nor so dangerous to life. Tobacco smoking, to one accustomed to it, is sedative to the cerebro-spinal nerve centers and calms an overwrought and excited mind; in this way it produces relaxation of nerve tension and a feeling of contentment. It is claimed to be an aid to digestion and an energizer of peristalsis, but I question the accuracy of these statements. It helps to produce a sensation of rest in a fatigued body and makes the thoughts flow faster and in a more harmonious way. On the other hand it may produce a disagreeable dryness of the tongue, congestion of the pharynx and hoarseness of the voice. A chronic, irritable cough may result, which is difficult to cure until the smoking is discontinued. Probably the most common complication following its excessive use is palpitation or irregularity of the heart from nicotine poisoning. These symptoms are always unpleasant and may be dangerous, for occasionally they are accompanied by angina, true or false. In children, tobacco is always injurious, although we see many youngsters, only recently out of the kindergarten, puffing

at cigarettes. This early use, if indulged in to a great extent, may stunt their development, either physically or mentally or both.

The tobacco habit, once formed, is, for most smokers, difficult to break and requires stamina and determination to overcome it. It is quite apt to grow upon a person and become excessive, but there is no way of telling what the limit should be, except when it produces unpleasant effects. Probably the cigar is the least harmful; although the pipe, if kept clean and equipped with a long stem, may not be much worse.

Years ago it was thought that smoking often produced epithelioma of the lip, tongue or throat, and the term "smoker's cancer" was applied to the condition. In those days a short-stemmed clay or corn-cob pipe was most often used, and the stem would become hot and cause irritation or near-blister. When it was the lip that became affected it was always the lower one and at the place where the pipe was habitually held, thus giving credibility to this theory of causation. For some reason I do not see so many cases of labial epithelioma as formerly, although cancer is much more common; but possibly this may be because clay pipes have gone out of use. The only case I have seen in a long time was in a non-smoker.

Tobacco has been accused of causing hypertension and our authorities advise that it be discontinued or greatly restricted in this condition; but as hypertension often occurs in those who never use it, and even in women, it is difficult to estimate its influence. However, as a routine measure it is well to limit it to a minimum.

Of late the big tobacco companies have engaged in an intensive campaign for recruits to the already huge army of cigarette addicts; and their efforts are largely directed to the youth of both sexes, especially the young women, many of whom are taking up the fad. What the effect will be on the next generation is impossible to foretell. It can't be especially pleasing. Nicotine is an active poison, two or three drops having killed a dog in a laboratory experiment; and a poultice of tobacco leaves applied to a wound is reported to have caused the death of a twelve-year-old boy. Smoking carries the fumes of the drug to the pulmonary air cells, where they may be absorbed into the blood and exert their toxic action. They certainly can not have a very salutary effect upon heredity; and heredity from two parents would be twice as bad as from one. But I have faith that many of these young ladies will become disgusted with the smoking habit and eventually will give it up. But a habit once formed is hard to break, and some of them, I fear, will be ensnared for life.

Are There Contraindications to Atabrine?

(A Case Report)

By Oliver P. Mutterer, B.S., M.D., and O. F. Matthews, M.D., Olla, La.

ATABRINE is relatively a new drug; therefore, like most new drugs, it is much in vogue at present. We have searched the literature but have been unable to find any recorded contraindications to its use, except in the estive-autumnal infection.

This drug was first brought to our attention by an abstract appearing in the *New Orleans Medical and Surgical Journal*, in which Jones¹ reported 40 cases of malaria treated with Atabrine, with ill effects in 3. One of these was excessive vomiting; another a woman, pregnant two and a half months, who delivered a macerated fetus; and the last a negro seventy years old, who died of uremia at the end of four and a half days.

Beck² reported jaundice in a child of 13 years, following the use of Atabrine. The liver was palpable and painful and the child was weak and vomited. Blood examination showed 760,000 red blood cells per cu. mm. This child showed hematuria.

That the yellow discoloration is not infrequent, is shown by the third general report of the Malarial Commission of the League of Nations, in which they advise against its use prophylactically, because of its tendency to color the skin yellow. A pamphlet issued by the Winthrop Chemical Co. states that the yellowish discoloration of the skin is due to the deposition of the drug under the skin, and not to any disturbance of the liver function.

In view of three recent cases (the history of one following), we wonder if the yellow discoloration is entirely due to the deposition of the drug under the skin. It will be noted that in Beck's case the liver was enlarged and the child was weak and vomited. Jones likewise reports one case of excessive vomiting. Our case showed signs of meningismus.

Because of our inability to find any case approaching the findings in ours, we have thought that it merits reporting, even though we know that no conclusions can be drawn from one case.

Case Report

O. L. A., white, male, 21 years of age, complained of drowsiness and weakness.

On July 19, 1934, the patient had a chilly sensation (no rigor), one blanket was placed over him and in a short while he began to have fever, which remained but was of low grade. The following day he felt better, but

still had a slight fever. July 21 he had another slight chill, one blanket again sufficing; this was followed by an increase in fever.

The patient's father purchased 15 Atabrine tablets from a local druggist. One was given July 21, at night, and then three a day. July 22 the fever became higher and a physician was called. At that time the patient's temperature was 102.3°F. and he was extremely restless, tossing about his bed. Because of the Atabrine no smear was made, and the patient was advised to continue the drug.

July 24 the patient began to have a peculiar appearance (as stated by the family), and the physician was called again. He advised removal to a hospital.

On July 25 the patient was admitted to the hospital in a semicomatose state. He refused all nourishment and would drink only a slight amount of water.

Physical Examination July 25, 1934, revealed a white male about 22 years of age, well developed, hypersthenic habitus. He lay quietly in bed and was aroused with difficulty, going back to sleep as soon as allowed to do so. The entire body showed a marked degree of jaundice.

The eyes showed marked icterus of the sclera; pupils equal, no irregularity, and reacted to light. Ophthalmoscopic examination of fundi apparently normal, except a yellowish cast to the retina.

Other examinations negative, except sordes on the upper and lower lips; slight tenderness over the entire abdomen, more marked in the right upper quadrant; patellar and Achilles reflexes increased bilaterally, and suggestive Babinski bilaterally.

The patient remained in a semicomatose condition throughout the night. On July 26, 1934, the following laboratory work was done:

Urine

Sp. gr. 1.024.
Color, red-brown.
Reaction, acid.
Albumin, negative.
Sugar, negative.
Micro., Occ. W.B.C.
and hyaline casts.

Blood

Erythrocytes, 5,250,000
Leucocytes, 3,750
Lymphocytes, 40%
Neutrophils, 60%

A blood smear was positive for tertian malaria gametocytes; no ring forms found.

On July 27, a spinal puncture was made. Spinal fluid under 14 mm. Hg. pressure; clear; slightly yellow; no coagulum; cell count, 28 lymphocytes per cu. mm.; globulin negative; no bacteria in smear of sediment obtained by centrifuging; specimen of the blood and spinal fluid was sent to laboratory for Wassermann and Kahn tests. Icterus index, 30; phenolsulphonaphthalein test, 80 percent.

1.—Jones, P. H.: Forty Cases of Malaria. *New Orleans M. & S. J.*, 85; 759; 1933.

2.—Beck, O. H.: Atabrine. *N. O. M. & S. J.*, 86; 241; 1933.

On July 29 the report of the spinal fluid and blood was negative for both Wassermann and Kahn reactions.

On finding the tertian gametocytes, $\frac{3}{4}$ grain (24 mgm.) of Plasmochin was given three times daily for five days. This was followed by a rise of temperature to 100.8°F , on July 26, which began at 8:00 P.M., reached a maximum at 2:00 A.M. July 27, and fell to 98° at 4:00 P.M. July 27, remaining at this point until 8:00 A.M. July 28, when it reached 98.3° and remained there.

Following the spinal puncture on July 27, and the administration of Plasmochin, the patient became more rational and gradually became normal.

Comments

We have seen several cases of jaundice resulting from the use of Atabrine in malaria, but this is the first in which it has been so profound and in which it has been accompanied by signs of meningismus.

We became interested in knowing if this jaundice was due to a hemolytic action of the drug or to hepatic damage. No renal complication was present, as the urinalysis was normal and also the kidney function. We decided to do a total red cell count, to see if there was any destruction of the red cells. This count was normal, although three separate counts were made and the average taken. No count varied more than 100,000 cells, total. We are sorry that we were unable to do a Van den Berg test, but we do not have the facilities.

Because of the normal red cell count and because no nucleated red cells were visible in the stained smear, we believe that the jaundice in this case was due to hepatic damage.

The spinal puncture was made at 2:25 P.M. and about 8 cc. of fluid removed. It will be noted that the temperature began to rise about $5\frac{1}{2}$ hours after the spinal puncture. As Plasmochin* was also given, we do not

*Russell, Paul F.: Plasmochin, Plasmochin with Quinine Salts, and Atabrine in Malarial Therapy. *Arch. Int. Med.*, 53; 309.

know whether the rise of temperature was due to the Plasmochin or to the spinal puncture. We do know, however, that the patient's mental condition began to improve about 30 minutes following the spinal puncture.

On July 30, another blood smear was made and found to be free of malaria in any form. The icterus index was 12, and the patient was eating whatever was given him. He was mentally normal and said that he felt "fine." The spinal fluid was under 8 mm. of Hg. pressure and the cell count was 6.

It will be noted that only seven tablets, or 10.5 grains (0.66 Gm.), were given when the yellow discoloration became evident. This patient weighed 198 pounds, and this seems a small amount of the drug to produce so profound a discoloration. We do not believe that the drug could have caused the icterus index to be so high, as it would have had to discolor the blood serum also. The tenderness in the right upper quadrant also points to a hepatic condition.

We are unable to explain the spinal fluid findings and the signs of meningismus.

This case is presented in the hope that further work will be done to determine whether the jaundice following the use of Atabrine is due to hepatic damage or not. We still use Atabrine, and expect to continue doing so, but we would like to know the contraindications.

Since this paper was written we have seen two additional cases which have shown an icterus index above normal (one 15 and the other 20). Neither of these cases showed any sign of meningismus. No treatment was given. One patient became normal at the end of one month and the other (whose icterus index was 20) has been under observation for 3 weeks, with the jaundice still present. His icterus index, at present, is 12.

LaSalle Sanitarium.

POLITICAL MYSTICISM

*So long as a nation has not lost faith in itself it is possible for it to remodel its institutions to any extent. If it gives way to sentimentalism or sensibility or political mysticism, or adopts an affectation of radicalism, or any other ism, or molds its institutions so as to round out to a more complete fulfillment somebody's theory of the universe, it may fall into an era of revolution and political insecurity which will break off the continuity of its national life and make orderly and secure progress impossible. . . . The great engine of political abuse has always been political mysticism.—*PROFESSOR W. G. SUMNER, Yale Univ. (1889).

SOUL, MIND AND BODY

*The physician who does not intellectually respect the complex riddles of soul, mind and body, and their interdependence, is unfit for the higher seats in the temple of the god of medicine . . . It is the power to reason from uncertain premises to conclusions as often unsure that makes the best physician.—*DR. S. WEIR MITCHELL.

Gonorrhea in the Male

By Eastwood Landa, M.D., Saskatoon, Sask., Canada

GONORRHEA has been referred to as "the unwanted child" in medicine. That may be because it is the "father of gynecology." About 80 percent of female pelvic operations are performed as a result of an improperly treated urethritis in the male. We do not know any more than the earliest workers knew about the clinical manifestations of gonorrhea, but we do work under an added advantage by being able to use the microscope in the diagnosis of this condition. Our most indispensable means of following the progress of gonorrhea under treatment is found in the use of the two-bottle test (I use ordinary tumblers).

Pathology

One cannot hope to treat a disease successfully unless one becomes familiar with the morbid process that is taking place within the tissues concerned. Briefly, we are dealing with an acute inflammation that behaves in the same fundamental way that inflammation behaves in any mucous membrane of the body. The organisms find their way to the columnar epithelium and produce a congestion of the mucosa and submucosa. At the end of 48 hours the glands of Littre and the lacunae of Morgagni are stuffed with gonococci and leucocytes. The columnar epithelium is very non-resistant to the invader. The stratified squamous epithelium of the fossa navicularis is more resistant and does not desquamate so readily as does the columnar epithelium.

An inflammatory exudate is thrown out, which is the body's response to the endotoxin liberated by the invading organism. Phagocytosis is the main body response. The inflammation may spread, by direct extension, to the submucosa and cavernous tissue of the body of the penis; or it may spread backward to the trigone of the bladder. We are dealing with an inflammation of a non-resistant structure and must handle it with extreme care and gentleness.

In spreading as far as the trigone of the bladder, the inflammation would involve the posterior urethra and all the associated structures, or even travel via the ejaculatory ducts to the seminal vesicles and the epididymis on each side. Cowper's glands may bear the brunt, taking their supply of infective material from the bulb of the urethra. If the veru montanum becomes eroded and a small vessel is ruptured, pyemia may result, with foci in other parts of the body not related to the urogenital tract, such as joints, muscles, etc. Latent gonorrhea is explained by the fact that there are so many glands with small ducts that may become blocked with the desquamated epithelium.

It is evident, therefore, that we must try to relieve the congestion and reduce the inflammation by aiding the narrow urethra to throw off its desquamated cells and allow for free drainage of the exudate. By mild stimulation we can assist the tissues to produce new epithelium that is more resistant to the gonococcus.

If one does not treat this condition with care, one will maintain the inflammation by irritation and aid the infection to be chronic—one may be hindering the body's responses. The exudate may become organized into fibrous tissue, and the tube, that is so pliable normally, may become a rigid bar—a urethral stricture. This complication, which is undoubtedly due to meddlesome activity, as opposed to masterful inactivity on the part of the physician, is entirely avoidable.

Diagnosis

Never make a diagnosis of gonorrheal urethritis unless a stained smear has been examined microscopically. One does not have to have Gram's stain—methylene blue is ordinarily sufficient. It is speedier and, for the general practitioner, is a stain that serves us well. Look for the typical diplococci in the pus cells. Their presence spells gonorrhea, and one may be sure that one is dealing with the specific organism.

To determine what part of the male urethra is involved, bring into service two ordinary drinking glasses and have the patient void the first two ounces of urine into one glass and the remaining urine into the second glass. Note the clearness or turbidity. This test is valueless in latent gonorrhea and has its limitations in acute gonorrhea; but in uncomplicated anterior urethritis it is enough to know that the first glass is cloudy and the second is clear.

To explain why a clear second glass is not conclusive proof that the posterior urethra is not involved, look into the posterior urethra. If there is a large enough collection of pus to force the vesical sphincter, the second glass will be cloudy, indicating posterior involvement; but should there be only a small amount of pus present, then the sphincter will not be forced and the second glass will be clear, yet there is a posterior infection. However, it is the best test we have at hand and one can take it for granted that the posterior urethra is not involved if the second glass is clear.

In uncomplicated anterior urethritis, the first glass changes. It remains cloudy for the first two weeks; hazy during the next two weeks; clear, with shreds, in the fifth

week. The shreds disappear during the following two or three weeks.

General Treatment

In a case of acute, specific anterior urethritis, affecting a male, we must keep the infection localized to the anterior urethra; we must stimulate the local tissue response; and we must assist the defenses supplied by nature to overcome the infection.

The patient is given a careful account of the disease and is impressed with the fact that he must obey certain hard and fast rules in regard to his conduct, or the therapeutic efforts will be useless and he will never obtain a cure.

In brief, he is to refrain from any sexual stimulation, no matter how trivial. He is absolutely to avoid all alcoholic drinks, and must never strain or lift heavy weights with a full bladder. The old plan of putting a patient with acute gonorrhea on a special diet has been proved valueless; nevertheless, I ask such patients not to eat any spicy foods, since what bites the tongue will bite the urethra. They may partake of all the aerated waters except ginger ale. Many of our ginger ales contain capsicum. Aerated waters are good, for mechanical flushing of the urinary tract, and are merely water disguised.

Personal hygiene must be vigorously enforced. The hands must be kept very clean and the nails kept short. Constipation must be combated. Always warn these patients about keeping their fingers out of their eyes. Wash the infected part with warm soap and water daily. As for dressings, I have found that an ordinary jock-strap, with cotton, is the best, cheapest and most economical.

Prophylaxis

Before we discuss local medication, let us consider how this disease can be prevented. There are five factors: (1) Education; (2) continence; (3) condoms; (4) mechanical (soap and water); (5) chemical.

Education: The public should be educated as to the way in which this disease is contracted, and shown that they are leaving themselves open to infection, no matter with whom they have illicit coitus. If we can carry on a series of lectures and teach the high-school boy and girl the dangers and pitfalls of sexual intercourse, we will have gone a long way. They are the men and women of tomorrow, and forewarned is forearmed.

But what possibility is there of ever doing that when the "powers that be" cannot see their way clear to establishing prophylactic clinics. There are, of course, public dispensaries for the treatment of venereal diseases, but that is like putting the lock on the door after the horse is stolen.

Continence: Each one may figure that out for himself.

Condoms: Here we have an ideal preventa-

tive; but patients have asked that I procure condoms for them, because they did so hate to ask for them over the drug counter. Moreover, there are many people that haven't the remotest notion as to how condoms should be used.

Mechanical: Soap and water are not denied to the most destitute, yet no one seems to bother using them after exposure to venereal disease, though I am sure that many will agree that their thorough use is of some prophylactic value.

Chemical: The word chemical seems to suggest a panacea for all evil, to the lay mind. It seems that here we have the closest approach to foolproof prophylaxis in venereal diseases; but after the first two hours following exposure, the value of such measures diminishes rapidly.

A good method, that has served me well in the past, is to advise the patient to instill 2 cc. of 2 percent Protargol (strong silver protein) into the urethra very gently and allow it to remain for 10 minutes *by the clock*. This acts as a positive preventative for gonorrhea. One must remember that some urethras cannot stand even the mildest irritation. They develop a discharge that may last from two to ten days.

It is a good policy to have the patient anoint the penis and external genitalia with 30 percent calomel ointment and inject a small amount of it within the lumen of the urethra.

Curative Treatment

By the Doctor: I do not hesitate to repeat to the patient the warning regarding behavior, for if one does not obtain cooperation from the start, it is much more difficult to obtain it later. If these patients abstain from sex activity and alcohol, the clinical course of the disease is shortened and they are more comfortable during the course of treatment.

Oral Medication: I feel that the only real "drug by the mouth" that affects the clinical course of anterior urethritis is *water*, which has the mechanical effect of flushing the genito-urinary tract.

I use sedatives in the acute complications. Serenium, Pyridium, Niazo, acriflavine, Urasal, Gonosan, sandalwood, copaiba, and the like, no doubt have their uses in proper hands, but I do not recommend them for the general practitioner. It is better to depend on irrigations and instillation into the urethra, along with copious drinking of water.

Irrigations: Use one substance for irrigations, and you will soon learn what it can do. Do not jump from pillar to post, or you will find that the patient is not making any progress and he will seek advice elsewhere. Remember that the patient is trusting you and you must not try numerous remedies experimentally. I use potassium permanganate, 1:8,000, mostly; sometimes a 1:25,000 solution.

Technic

The practice in my office is to insert a No. 12 rubber catheter into the urethra and irrigate with a 10 cc. syringe. The patient is asked to void the urine into two bottles before each treatment; then the small catheter is allowed to enter the anterior urethra for a short distance—never more than one inch. The 10 cc. syringe is filled with 1:8,000 potassium permanganate solution at a temperature of 90° F., and the urethra is irrigated gently. This is repeated until about 10 ounces have been used, and is followed by the instillation of 2 cc. of 5 percent Neosilvol solution, which is retained for a minute or two, then allowed to drain into the sink. A clean piece of cotton is placed over the penis in the web of the jock-strap.

The patient is told to return at the same time daily, for a period of three weeks. The two bottle test is made each day, and smears are stained. I watch the smears mainly to see if the chemical is too strong for each particular urethra. This is evidenced by the appearance, suddenly, of many epithelial cells in the smear under microscopic observation. If at any time the patient complains of pain, stop all treatment immediately and watch for complications.

I always repeat, again and again, the warning that the patient must not have sex relations or alcohol until told he may do so, and take pains that he understands that, should he disobey orders, it will prolong his treatment at least three months—maybe more—and that he may develop permanent damage to his sexual organs.

The patient is seldom, if ever, allowed to treat himself during the first three weeks. It is during this time that he is more prone to develop complications than at any other stage of his disease. By seeing him personally at every visit, and taking careful note of the appearance of the urine in the two-glass test, the physician is able to treat the patient intelligently and arrive at a definite cure. Patients, for the most part, have the bad habit of using too much solution and forgetting the difference between instillation and injection.

We are dealing with one of the most sensitive mucous membranes in the body, therefore we must go slowly and carefully. The anterior urethra is a very non-resistant structure, yet, if it were left alone, it would, in all probability, effect a spontaneous cure. But we try to assist nature to arrive at a cure by stimulating the tissues to respond more quickly and we are likely to hinder nature's processes with strong solutions and trauma. We are not killers of gonococci; those that are lying ready to be attacked by gonococci are, in all probability, dead and lie, engulfed by the scavenger leukocytes, on the free surface of the mucosa. These would be

washed out by the urine anyway. The ones that we would like to strike are those that lie safely tucked away in the glands and crypts. These are not approachable by gonococicides. We stimulate the tissues to become more resistant; better drainage is provided and the heat in our irrigations brings more blood to the part and promotes healing. The silver salts, intelligently applied, are soothing.

Each day there is less and less discharge, while the patient is under treatment, and at the end of three weeks there is little or none present. By this time the first glass becomes clear, with only a few shreds. This tells us that we may put the patient on alternate-day treatment for about a week; then once a week; then no treatment for about a week. Usually we find progressive improvement but there are times when, no matter how careful we are, unexplainable complications develop. There is also the patient who shows progressive improvement, with a lessening of discharge, and suddenly returns with a profuse discharge. He has disobeyed orders and, when this is corrected, goes on to cure.

When we arrive at the stage where we have two clear glasses, and the discharge is absent, the patient wants to know whether he is cured or not. Take him off treatment for about a week and, if no discharge occurs, apply the inferential tests and then be cautious about pronouncing a cure.

Before considering the evidences of cure, something should be said about vaccines. In my opinion, vaccines do not have a place in the treatment of acute anterior gonococcal urethritis in the male. Vaccines and immunogens should not be used unless one has the facilities to carry out the complement fixation test, which acts as a guide. Without this control, one will obtain the most unpromising results. In my own experience, I produced a few cases of arthritis.

Vaccines have a definite place in the treatment of chronic gonorrhea, but even here they should only be used with a good control. Every patient is an individual, and the dose of vaccine that may not be enough to give one a reaction at all, may produce a tremendous reaction in another. My opinion is, that vaccines should not be used in general practice.

A word should be said here as to the feasibility of having the patient treat himself. If the patient treats himself, the physician will be kept busy treating every known complication. There are some people intelligent enough to learn the proper use of a urethral syringe, but, for the most part, they either use too much solution or inject it too forcibly and drive the infection into the posterior urethra. The patient's job is to drink plenty of water, observe careful personal hygiene and abstain from sex activity and alcohol.

Of course the man who is "on the road" — the traveller — cannot see his physician daily. He must be instructed carefully as to the difference between instillation and injection and shown, in the office, how it should be done, and then do it, under supervision, before he is trusted with it. He must never lose (figurative) sight of the top of the column of fluid and, if he notices pain or a cloudy second glass, he must immediately stop treatment and return for a consultation.

Evidences of Cure

When the urethra has been under treatment for six or seven weeks and seems to be free of gonococci, have the patient drink a couple of bottles of beer in the evening and present himself at the office the next day. Look for discharge. Ask him if he noticed any himself. If this proves negative, pass a sound the following day, to light up any latent focus.

In our offices we pass a number 18 French sound as far as the peno-scrotal angle, and repeat this three or four times at the single visit. We give him a slide and ask him to bring back a thin smear of any discharge that may form in the 24 hours that follow. If this proves negative, we increase the size of our sound to a No. 20 F. and massage the urethra over it. This is followed by prostatic massage and a smear is examined. A urinalysis is done the next day in a search for pus cells.

If all these tests prove negative, the patient is "probably" cured, but I never tell a patient that he is cured. I ask for a visit to my office the morning following sexual excitement, and if the examination is negative, I explain very carefully to him that he has responded negatively to all the tests of cure that I know and that he is, in all probability, cured. But since my tests of cure are only inferential, there is always room for error. He must not, under any circumstances, have sexual relations without the protection of a good condom, for at least three months. If he reports to me after that time, I will advise him further. He must present himself at the office every month for a check-up.

Bad Treatment

Some of the common practices that are in vogue are brought to my attention by patients, as follows:

1. Making a diagnosis without a microscopic examination.

2. Handing a patient a bottle of Argyrol solution or the like and asking him to inject it into his urethra several times a day. This is an indefensible practice and may cause a monstrous injustice to the patient or his family.

3. Early instrumentation. I distinctly remember a lecturer in urology telling us, as a group of students, that we should always pass

a catheter as far as the posterior urethra and instill Argyrol solution in that spot before the organism reaches it.

4. Massaging an acutely inflamed prostate and producing epididymitis.

5. Giving a patient, who feels "run down," an alcoholic tonic.

Complications

There are about sixteen common complications in this infection. I will mention the most important ones briefly.

Posterior Urethritis and Prostatitis: By going slowly and carefully in the treatment of acute anterior urethritis, a patient seldom develops a posterior involvement; but there are some patients who develop all the complications in the list, no matter what one does for them, and there are also those who forget all the rules one lays down for them and can blame only themselves for the complications.

If this condition appears, I always warn the patient that he will be under treatment three months at least. When he complains of bladder discomfort, urgency, frequency and nocturia, stop all treatment and give sedatives by mouth, but do not put him to bed.

I always wait about ten days for the patient to regain his comfort, and then begin treatment for the complication. This usually takes about ten days.

Technic: The patient is asked to void in the two bottles, and one notes a cloudy second glass. Then one should attempt to give a bladder irrigation, using potassium permanganate solution, with the tank about three feet above the level of the urethra. The patient is asked to relax as if he were voiding, and that relaxes the cut-off muscle and allows the solution to go into the bladder. Watch the level of the irrigating glass and allow about 5 or 6 ounces to enter the bladder; then have him void, and repeat the process three times. I do this daily for about two weeks or so.

Sometimes one cannot introduce the solution into the bladder at the first attempt. Do not try too hard. Have the patient go home and try the next day. If at any time you cause pain, follow the old rule and stop all treatment until the pain subsides.

If the prostate is inflamed use hot rectal irrigations, with a pair of return-flow catheters. Put the patient to bed for a week and the condition will improve. Some men advocate the use of cold irrigations, but in my mind it all depends on which offers the most relief to the individual concerned. Suspend all treatment for a week, and if there is no discharge, give biweekly prostatic massages, with gentle strokings, but do not under any circumstances cause the patient any pain, or he is bound to develop acute epididymitis.

I examine the prostatic secretion for about three months, with a microscope, and note the disappearance of the pus from time to time. If, after three months, pus still remains in the

prostatic secretion, stop the massages and ask the patient to go away for two or three months, with no treatment, and then repeat a series of about twelve massages. This will usually result in a cure.

Epididymitis: This is a preventable complication. In connection with it, one must always remember that the patient may be left sterile, and he will never thank his physician for that.

Epididymitis may come on following coitus, indulged in before the patient is cured; or it may be produced by irrigating a case of acute posterior urethritis too forcibly, with high-pressure irrigations. Never allow the tank to be higher than $3\frac{1}{2}$ feet above the urethral level. Another cause is too early instrumentation of the urethra. I once produced an epididymitis by passing a catheter to relieve acute retention; but one has to gamble in a situation as grave as that. Massaging a highly inflamed prostate is criminal, for the same reason.

If acute epididymitis is already present, we must do something to relieve the patient immediately. If an abscess forms and pus points, incise and drain it.

In my practice I use non-surgical methods, and seldom if ever put the patient to bed. A Bellevue bandage is applied and left in place for ten days or more. Then the acute symptoms subside, the swelling diminishes and I treat them for posterior urethritis.

In the acute stages of epididymitis, give 10 cc. of calcium gluconate solution, intravenously, every day for 4 or 5 days and there will be a more rapid response and relief of pain.

Seminal Vesiculitis I have never met in my practice, to my knowledge.

Couperitis is easily felt and if pus points, incise and drain it.

Arthritis: I can best give my views on this condition by saying that it is a severe complication that may stiffen a joint for life, and one does not like to encounter it, as all that can be done is symptomatic treatment; and although the masters of this disease tell us that vaccines are good, we are often not in a position to use them intelligently. Calcium therapy is good here, to relieve pain.

Periurethritis—Chordee: An infiltration of the corpus cavernosum. Give the patient an ethyl chloride spray, and have him spray the root of penis if an erection threatens. This usually offers immediate relief. (This same cooling method is without a peer in the management of an adult, following circumcision.)

Lymphadenitis: The so-called gonorrheal bubo never suppurates. If painful, apply local heat. Treatment is seldom necessary.

Follicular Abscess: An infiltration around a urethral follicle that usually points to the skin. Drain it (through the urethra if possible) and stop local treatment, or a sinus may develop.

Summary

If I might attempt to summarize the treatment of acute gonorrhea in the male, I would say:

OUR BEST REMEDY IS WATER.

OUR ONLY SAFE METHOD IS GENTLENESS.

To me, this is the "Law and the Prophets."
105 Helgerson Block.

PERSONALITY AND POLITICS

When practical politics enters the room, personality flies out of the window. Psychology, practical and personal, by whatever name it is known or however simply it is manifested, is one of the most valuable assets of the successful physician—successful in rendering aid and comfort to the suffering patient. The ability to instill a clinging confidence can never be replaced by the expediency of the practical politician. Does anyone have grounds for the slightest doubt that under state medicine politics would dominate and sustain the medical appointments?—Bul. Evanston Br., Chicago Med. Soc., Oct., 1934.

RIGHT, JUSTICE AND INDEPENDENCE

I do not want to live under a philanthropy. I do not want to be taken care of by the Government, either directly or by any instruments through which the Government is acting. I want only to have right and justice prevail so far as I am concerned. Give me right and justice and I will undertake to take care of myself. . . . I will not live under trustees if I can help it. . . . I do not care how wise, how patriotic the trustees may be. I have never heard of any group of men in whose hands I am willing to lodge the liberties of America in trust.—WOODROW WILSON, in "The New Freedom."

PHYSICAL THERAPY AND RADIOLOGY

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Physiologically Indicated Physical Therapy

NOT infrequently a physical therapist, for some occult reason, will disparagingly state that physical therapy is too much a matter of "machine therapy." He thus discloses an apparent animus against the occasional increase in scientifically evolved physical therapy equipment, and would have the uninformed believe that simple physical therapy agencies, such as hot water bottles, fomentations, a bathroom heater, simple gymnastics, massage, regulated passive exercises and various elementary physical therapy devices, will, in large measure, satisfactorily accomplish that which is so much more expansively claimed in behalf of the more complicated and costly physical therapy appliances.

Naturally, if and when simple measures will suffice, it is superfluous and foolish to employ more intricate procedures. However, to condemn more conveniently and satisfactorily applicable agencies just because of their elaborateness and expense, is similarly and irrationally to condemn the electric light as a substitute for the kerosene lamp, and to wishfully dispose of the lavish, modern surgical equipment for the crudity of a pre-Listerian era.

A good craftsman can always achieve better results than an inferior workman, even with a limited choice of tools; but the expert operator will often obtain otherwise-impossible results, if furnished with cleverly designed appliances. Consequently, it is a natural corollary that the physical therapist needs every worthwhile device or machine attainable, and the brains and experience necessary to evaluate and apply them adequately.

Physical therapy necessitates a knowledge of the physiologic indications for, and the physical characteristics or therapeutics of, each and every agency employed. It is not only advisable to know that diathermy is a high-frequency current of comparatively low voltage and high amperage, in contrast with some high-frequency currents which are of comparatively high voltage and low amperage, but also that diathermy induces heat of a more comprehensive character than does an infrared generator, an incandescent light bulb or an electric pad, yet all these heat devices have their own special field of indicated utility.

Both the faradic and the interrupted constant current will stimulate healthy nerves and make muscles contract; but to qualify as an electro-diagnostic expert it is essential to know *why* an impaired nerve and muscle will not respond to a faradic current, although the muscle may, to a certain degree, contract under the impulse of a slowly-interrupted constant current.

Water-cooled ultraviolet generators emit considerable ultraviolet radiation; yet the cold-ray generators are becoming deservedly popular for local treatments, because of certain characteristics impossible of duplication in the former device.

Diathermy has been satisfactorily administered for orificial treatments—vaginal, urethral, aural; yet other available and less costly scientific devices are now more often utilized, because of some one or more specially applicable physical characteristic.

Physiologically indicated physical therapy

means the application of that agency or appliance which will most quickly and easily secure desired results. The expensiveness of an apparatus does not imply its clinical

worth; but expert physical therapy treatment does require much and elaborate equipment, although many exceedingly useful devices are comparatively inexpensive. J. E. G. W.

X-Ray Treatment of Thyrotoxicosis*

By M. J. Hubeny, M.D., Chicago

TWENTY-EIGHT years ago, Dr. William Mayo stated, in a discussion of this subject at the Cleveland Academy of Medicine, that his own operative mortality was 16 percent, for which he was severely criticized. If surgeons were willing to accept a method and develop it to such a satisfactory state as exists today, the roentgenologist also, by tenacity of purposeful and thoughtful endeavor, has definitely established the roentgen-ray treatment of thyrotoxicosis as another curative and palliative agent.

The very fact that this disease is approached from so many angles, distinctly indicates that considerable medical and surgical statesmanship is necessary in treating such cases, and it becomes increasingly evident that team-work is important. It also indicates that, because no one method is permanently curative in all cases, the symptom complex, with its varying manifestations and combinations, cannot be due to identical causes and, consequently, resourcefulness and judgment are necessary to select that method or combination which will be most beneficial and least hazardous.

The American surgeon has so developed the technic that the mortality rate is low; however, this low rate would not apply to most surgeons, who are inexpert, and because the latter predominate the mortality is distressingly high. Operative interference has made a wonderful contribution, because up to that time there was no satisfactory treatment.

It is quite probable that endocrinology will eventually be an important factor in treatment, for it is desirable to discover disease processes and treat them long before they have weight and dimension—long before they become ponderables. In this manner the endocrines and x-rays have much in common.

Roentgen-ray treatment needs no especial defense, because its usefulness has been definitely proved; it is not new. It is a strange historical coincidence that Dr. Carl Beck, a surgeon, of New York, was the first to suggest its use, as far back as 1905, in a case of exophthalmic goiter that had been operated upon and in which sufficient time had not elapsed to permit the wound to heal, and also in which there was no satisfactory abatement of symptoms. This patient was

treated with the x-rays and made a complete recovery.

Radiologists have known for many years that x-ray therapy is a valuable agent with which to treat thyrotoxicosis; the literature is replete with interesting data. However, through the untiring efforts of Dr. Leon Menville, who two years ago sent a questionnaire to 200 radiologists, some of whom were practising in large cities, some in small cities, others in the rural districts, a most comprehensive statistical compilation was made:

Total number of cases, 10,541; percentage of cures, 66.22; percentage showing marked improvement, 21.07; percentage of recurrences, 5.45; percentages of failures, 12.4; number of cases in which surgery failed, 979.93; percentage treated after operation, 9.95.

It must be concluded from this statistical study that radiation therapy is a safe form of treatment and that the splendid results obtained are not restricted to a few radiologists of great experience, but are general among the radiologists of this country. It should, therefore, be appreciated that radiation therapy, at the present time, offers more to certain goiter patients than any other form of treatment. Myxedema is the only post-operative cause of death, in patients when operated upon, which can be produced by excessive radiation therapy, and happens only occasionally. This practically can be avoided by dependence on clinical data and metabolic check-ups. For this reason, radiation therapy is the safest of any single method. It offers a high percentage of cures and its economic consideration is of importance. Should operation be deemed imperative, after irradiation, there can be no contraindications.

It is unfortunate that frequently cases are sent for x-ray treatment as a last resort, after other forms of medication have been used, but even in spite of this some remarkable results occur. It is my conviction that those cases in which a rapidly developing toxemia is occurring had best be operated upon, and it is quite generally conceded that those cases in which other complications exist, so that operation is hazardous, are better treated with x-rays.

Unfortunately, immediate response to x-ray therapy is not of frequent occurrence, but

*Read before the Chicago Medical Society (goiter symposium), Dec. 13, 1933.

this should not deter one from using it. Frequently, mild cases can continue with their daily work; however, complete rest, where indicated, is imperative; also complete cooperation with the attending physician is desirable, so that complications can be properly taken care of, for after all, we are treating a human being and not merely a disease. Focal infections, such as teeth, tonsils, sinuses, etc., should be cleared up. Incidentally, when diseased tonsils are present, they can be treated with the x-rays simultaneously with the goiter, and removed at a later period.

The surgeon has a difficult decision to make, and it is with a sympathetic appreciation of his dilemma that the question is asked, "How much thyroid should he remove?" He does not want to produce permanent myxedema in place of possible existing temporary hyperthyroidism; neither does he want to produce parathyroid tetany.

It is quite possible that the gland has an inherent and natural tendency towards stabilization, which can be initiated by a partial removal or the biologic effect of the x-rays upon the hyperfunctioning glandular tissues. I sympathize with the surgeon when a questionable case insists on operation.

One occasionally hears about adhesions due to x-ray treatment. This has been definitely discredited. The dose is so small that at no time should any erythema be produced. Haste in resorting to operation after reasonable x-ray treatment should be avoided, as delayed cures are occasionally affected. Prolongation of life must come first and comfort and emotional stability second, but all surgical procedures should be carried out, as far as possible, with deference to the emotions of the patient, which so frequently are concerned with social condition and environment, and the knowledge that glandular structure is missing is not so assuring;

blemishes due to surgical scars are sometimes the precipitators of inferiority complexes.

These remarks should not be misconstrued as excoriations. They are not intended as such; however, it is desirable to mention facts.

A few years ago Lugol's solution was given prior to and during x-ray treatment, but this practice has been discontinued.

The Roentgen-ray technic approximates the following factors, which are changed when necessary: 125 kilovolts peak; skin distance 35 cm.; 4 mm. aluminum filter; 5 milliamperes of current. The time factor varies, also the areas treated, the size of the areas and the frequency of treatment. At no time is it necessary to give more than 55 percent of an erythema dose. The areas treated are of sufficient size to include the aberrant thyroids, the thymus and the cervical sympathetic ganglia.

The average time for appearance of improvement in symptoms is three weeks. Some cases require a discouragingly large number of treatments. Treatment is discontinued when the basal metabolic rate is near plus 15, the weight has increased and the pulse returned to normal. Recurrence is liable to occur, but should not cause any great worry, because additional treatment can be given.

In some cases, in which the basal metabolic rate is within the normal maximal limits and other early evidences of thyrotoxicosis are present, a few x-ray treatments can be given as therapeutic tests, with amazing results.

In conclusion, such discussions as this are salutary, because the family physician has the first chance to recognize these cases and to be continually perplexed with our failures, whether they be medical, surgical or radiologic and, in the final analysis, he alone can best tell us our inadequacies.

25 E. Washington St.

NOTES AND ABSTRACTS

X-Ray Treatment of Essential Hypertension*

APLICATION of roentgen-ray therapy to the pituitary body and adrenal glands, given in accordance with the endocrine theory of the etiology of so-called essential hypertension, has been followed by definite improvement, including a reduction of blood pressure, in 78 percent of a series of 78 cases.

Our experience strongly impresses us with the close relationship of the pituitary and adrenals. In most cases we do not believe it possible to determine which is primarily at

fault in the causation of essential hypertension.

There is no question but that the symptomatic relief of these patients is more striking than the reduction of blood pressure. A number have been almost completely relieved of their presenting symptoms while they have experienced but little reduction in blood pressure. One or two others had satisfactory reduction in blood pressure with relief of symptoms, but after the series of treatment was discontinued for a time the blood pressure showed a considerable rise. The method brings about symptomatic relief and a fairly satisfactory reduction in blood pressure in

*Internat. J. Med. & Surg., 47:343, Sept., 1934.

cases of essential hypertension, in the vast majority of cases. These patients should have the benefit of the careful supervision of a medical man throughout their course of treatment. The earlier these cases are seen, the more carefully they are treated, the better the prognosis.

JAMES H. HUTTON, M.D.

Chicago, Ill.

Radio Gymnastics For Chronic Catarrhal Deafness*

AN aurist among my classmates and I had a discussion about chronic catarrhal deafness and functional activity as to relief, if not cure, of it, as exemplified by use of the radio ear instrument as a gymnastic apparatus for the entire mechanism of the ears.

I determined to have an intelligent patient try it on the highest plane of study possible. When I mentioned his development to the aurist he approved of publishing the plan, whose results have been a gain of thirty to forty percent over the former low point of hearing.

Plan of Treatment

The following steps might be reduced to printed instructions, to avoid error from patient to patient:

1.—*Instrument*:—Standard ear phones of a five-tube radio, battery type, preferred as less noisy than a street-current machine. (A competent technician states that ear phones may be attached to any modern radio.)

2.—*Tuning*:—(a) Hearing by the more deaf ear should be good, but only by attentive effort, much as one strives to hear a speaker in a public hall with poor acoustic properties; (b) hearing by the better ear requires adjustment of the other receiver in front of the canal, up to equally attentive effort. If this equality is not attained, the better ear will be very quickly tired and may possibly be harmed through undue loudness.

Therefore, according to the degree of hearing in the better ear, the receiver is one-quarter, one-third, one-half, two-thirds or three-quarters of its own diameter in front of the auditory canal. If the better ear is normal, the receiver is on the temple and not at all over the auditory meatus.

An excellent check-up of the degree of loudness is the voice of the announcer between numbers. At first the patient should be content to lose ten to twenty percent of his words. Music must be tuned down much below the announcer's voice.

*M. J. & Rec., Dec. 6, 1933.

3.—*Frequency*:—Daily exercise, slowly advancing from five to thirty minutes during the first month of treatment, according to experience, reaction and improvement.

4.—*Time of day*:—Morning, because deafness is usually greatest then.

5.—*Choice of program*:—In the descending order of preference: speaking or singing voice; soft instruments, such as the violin and cello; organ; symphony concerts; operettas, etc. Avoid brass bands and jazzy dance music.

6.—*Immediate results*:—A sense of "clearing" of the ears, as refreshing as washing the face with cold water.

7.—*General health*:—The upper air passages and body at large should be kept at the best possible level.

8.—*Foci of disease*:—Absorption and infection must be abolished as far as may be—teeth, tonsils, sinuses and intestines.

Conclusion

If these details are followed, with modifications as required by different patients, improved hearing for each day will be obtained and in a few months the benefit will be very obvious, first to the patient and then to his family and friends.

VICTOR COX PEDERSEN, M.D.

New York City.

Physical Therapy in Fractures*

AT PRESENT I believe that physical therapy is used more to correct the results of bad surgery—indifferent reduction, improper or insufficient immobilization, fibrous replacement of edema—than for prophylaxis or early treatment, where it is chiefly of service.

On the basis of the pathology of injury and the physiology of repair, the surgeon may anticipate from physical therapy:

(1) To hasten the laying down of new tissue; (2) to carry away waste matter; (3) to increase local heat; (4) to prevent stagnation in the parts; (5) to relieve pain; (6) to maintain muscle function; (7) to maintain joint function; (8) to maintain the patient's morale.

The most propitious time for physical therapy is in the first 10 days. Heat, massage, muscle stimulation, active and passive movements, diathermy, hydrotherapy and exercises for the reeducation of muscles are the chief methods employed.

ROBERT H. KENNEDY, M.D.

New York City.

*Arch. Phys. Ther. X-Ray. Radium, 15:474, Aug., 1934.

A LIVING FOR THE DOCTOR

(The BUSINESS of Medicine)



Parenteral Injections Out of A Bottle

SUCCESSFUL physicians are, more and more, realizing that an important factor in their success is the use of parenteral injections of the drugs indicated. The psychic effect, on the patient, of having something *done for him*, on the spot, is excellent; the action of the drug or drugs used is far more prompt and certain; and the physician retains complete control of the case at all times.

Many drugs are now available for this purpose put up in ampules, all ready to use; and the number of such preparations is rapidly increasing. The same solutions are generally marketed also in bottles, containing several doses, and in this form are more economical if any considerable numbers of these injections are being given. These bottles are provided with special rubber stoppers, through which a hypodermic needle can be inserted, and are sometimes provided with gelatin caps, to keep the stoppers clean and to prevent them from blowing out if too much air is injected.

For those who are not entirely familiar with the best and easiest methods for handling these bottles of solutions for parenteral use, a few suggestions are here presented which may be helpful.

An all-glass syringe, of satisfactory capacity (usually 5 or 10 cc.) having been sterilized, is armed with a *sharp*, sterile needle of proper size (24 or 25 gage, $\frac{3}{4}$ to 1 inch long, for intravenous injections; 23 or 24 gage, 1 to 1½ inches long, for intramuscular injections).

With a large needle or pin, sterilized in a flame, pierce the *center* of the gelatin cap over the stopper, if one is present. This is to prevent blunting the point of the syringe needle, which might occur if the gelatin were pierced with it. This is, of course, done only when the first dose is used.

Withdraw the plunger of the syringe to a point representing the size of the dose to be administered.

Insert the needle through the pinhole in the gelatin cap (if present) and through the

center of the rubber stopper, until the hub of the needle touches the cap.

Depress the plunger, injecting into the vial the amount of air which the syringe contains. This is done to make positive pressure within the vial and thus facilitate the withdrawal of the solution into the syringe. If this maneuver is not performed, the negative pressure in the vial, when the plunger of the syringe is withdrawn, will prevent the liquid from entering the barrel.

Withdraw the plunger of the syringe until the proper dose has entered the barrel. If the vial is partially empty, it should be tilted until the point of the needle is well below the surface of the liquid. In withdrawing the last few doses, it will be necessary to draw the needle back until its point barely projects beyond the bottom of the rubber stopper, and then invert the vial while the proper dose is drawn into the syringe.

Cover the cap of the vial with several thicknesses of sterile gauze and fasten it with a small rubber band around the neck.

It is always preferable to inject medications intravenously, when conditions permit and suitable preparations are available, into one of the large veins on the flexor surface of the elbow, or some other accessible vessel, making the injection *very slowly*.

G. B. L.

The Dispensary Evil

CONTINUING our presentation of the manifold objections to the various phases of State Medicine, at this time we take up the subject of the misuse and maladministration of the free dispensary.

Everyone who has had anything to do with the various dispensaries of a municipality has been impressed with the gross miscarriage of justice, to the patient and community, and the manifest injustice to the medical profession, as shown in the transactions of these so-called charitable institutions. Patients who drive up to these clinics in taxis or private cars, wearing fur coats of excellent quality,

and carrying gold watches and vanity cases and fine lace handkerchiefs, would scarcely seem to be suitable grist for these charity mills. Yet such, daily apply to the clinics for free treatment.

It is a well known fact that patients fully able to pay a doctor's fee have donned shabby and worn clothes and visited free clinics, where they receive medical care gratis. Such abuses of charity are of daily occurrence, notwithstanding the efforts of the social service workers to eliminate the evil. The multiplication of free dispensaries attached to hospitals and medical schools, for the purpose of procuring material for clinical instruction, has done much to aggravate the condition. Consequently, a determined effort to eradicate the injustice, both to the physicians and the public at large, is becoming very general.

The abuses and the evils of dispensaries have been excellently summarized by the Sub-committee on Medical Practice of the Medical Society of New Jersey, of which Dr. Thomas K. Lewis is chairman. We reproduce a copy, with condensations, of this summary, as follows:

1.—Lack of proper and adequate investigation of the economic status of patients admitted for free treatment. Often no investigation at all.

2.—Carte blanche to the protégés of school nurses, field workers of various organizations, social uplifters and influential employers, without any investigation whatsoever.

3.—The absence of any standard interpretation of the meaning of the word "indigency."

4.—An over-zealous social service that has departed from its original function of assisting the physician, and has assumed a paternalistic attitude toward applicants for treatment.

5.—Medical service *de luxe*, offered on a silver platter to the poor and semi-poor, so that a certain stratum of society has learned to prefer dispensary service to that offered in the offices of private physicians.

6.—The prevalence of the belief among the laity that dispensary service is available to anyone, whether able to pay or not.

7.—Lack of any effort at control of admissions to fit the capacity of staffs of the dispensaries.

8.—Lack of mutual sympathetic understanding between the dispensary physicians and board of managers, resulting from the absence of official contact.

9.—The development of many clinics as adjuncts to public health departments, such as baby-saving clinics, prenatal clinics, immunization clinics and health camps. Because these agencies are provided for by public funds, no one is excluded.

10.—There are a few instances of lay-controlled clinics that actively solicit patients, in open competition with the medical profession.

We recommend a careful perusal and study of this summary of dispensary abuses, and also a careful consideration of the corrective suggestions recommended by the New Jersey Sub-committee. These suggestions are as follows:

1.—Patients to appear at a definite time, convenient to the physician who is donating his services.

2.—Control of the dispensary to be vested in a staff committee of three members.

3.—Recognition that the dispensary is a charity, and that it must be supported by charitable donations, with the physician giving his time and the philanthropic individual his money. The patient should be able to give nothing beyond the merest pittance.

4.—The personnel to be composed of: Physicians qualified in their particular branch; nurses whose entire duty is in the dispensary; clerks trained in handling patients and records; registrars who understand the various dispensaries and can elicit information from applicants for treatment.

5.—The patient should be one who cannot afford adequate medical care. Requirement for admission should be a note from the family physician stating that the patient is worthy of free treatment. The enforcement of this rule immediately solves the problem of dispensary abuse by non-charity patients.

6.—The social service should be so organized that the physician's instructions are carried out as he desires; and it should serve no other purpose. It should be directly under the control of the staff committee or the medical director.

7.—The pharmacy to compound and dispense only official drugs. All drugs to be dispensed without cost to the patient.

8.—The admission clerk to be a tactful individual who directs each applicant to his family physician or to the dispensary, according to his condition and means.

W. A. NEWMAN DORLAND, M.D., F.A.C.S.
Chicago, Ill.

TRUTH WITHIN

The truth can always be had by those who desire it, but one must seek it for himself. That only which we have within can we see without. If we meet no gods, it is because we harbor none.—DR. ALCINOUS B. JAMISON.

What the Emergency Relief Has Done to Medicine

UNDER our present procedure in the medical care of the indigent we are, in America, for the first time, definitely finding the doctor, who is primarily responsible for the patient's care, subordinated to the social worker, who in medical matters is the doctor's inferior. In other words, in spite of the doctor's vital importance in the treatment of his patients, he is constantly exposed to the whims, fancies and theories of the social worker. This follows as a result of the collection of a mere "pittance" for "services" rendered. We therefore find a definite tendency on the part of most medical men to become hostile toward the socially-minded worker, who may be our most articulate exponent of modern liberalism. What effect this will have on the future of our Government is as yet problematical; but if we may take any lesson from Continental Europe, we can see the specter of either extreme right-wing or left-wing despotism finding its support in the harassed and subordinated medical profession. Are the Emergency Relief officials in this way unconsciously opposing the liberal policies of our Federal Government?

The dispensaries and clinics have, in the past three years, found themselves bearing an intolerable burden. The number of patients has increased to the point where it became necessary for dispensaries to receive financial aid from additional sources. Inasmuch as 70 percent of all their patients were referred to them by the Council of Social Agencies, the dispensaries had to turn to the Budget Committee of the Council of Social Agencies for support; hence we find that social agencies are again assuming the dominant role in the dispensary practice of medicine and, through the dispensaries, are to a certain extent invading the medical schools. In services for the good of humanity, the dispensaries are able to treat the clients of the Emergency Relief at a much smaller cost than the private physician could afford to do; again, the Council of Social Agencies with a limited budget, is perhaps of necessity forced to use the cheaper dispensaries on every possible occasion. This again violates the intent and purposes of Federal Regulation No. 7.

In over 14 of the larger hospitals of Chicago we find the Council of Social Agencies again playing an important part. Many of these hospitals were privately endowed, not operating for profit. When one-third of their available former patients reached the lower stage where they were unable to pay for hospitalization and went on Relief, the financial problems of these institutions became

unsolvable. The Council of Social Agencies found that the Federal Government had made no allotment for hospitalization of patients, but as they controlled not only Federal funds but also private funds, it was a simple matter of bookkeeping to pay the hospitals for the institutional care of Emergency Relief clients. Again the doctors were the ones who were giving the major portion of the services rendered to the patients; but, true to form as far as we know, doctors were once more receiving practically no compensation for such services rendered.

Why Had Federal Regulation No. 7 Failed?

We may answer the question of the failure of Federal Regulation No. 7 by immediately questioning the sincerity of intention on the part of those directing the policies of the Council of Social Agencies, to make this regulation function. Of course this can in part be answered by a financial dilemma in which a total of \$30.00 per month is made to meet the budget of the average family. Naturally the street car company, the telephone company, the electric light company, the gas company, or the large chain grocery stores, will not supply the needs of the indigent for nothing. Moreover, in practically every case, these agencies are insisting on the customary retail prices for everything sold to these consumers. What can the harassed social worker do but avail himself of medical care as cheaply as possible (preferably for nothing), when and where it can be obtained. The solution of the present doctors' dilemma should then be apparent to every humanitarian practicing medicine. It should be more apparent still to the physician who has watched the trend of civilization in Continental Europe and still wishes to maintain the fundamental tenets upon which America was founded.

A Remedy

Those of us who have vision and have watched what has happened in Continental medicine, as well as among our European colleagues, must insist that here in America medicine be divorced from any other social activity. A definite budget must be allotted for the care of the indigent patients; this amount must be left to the doctors to determine; they shall also guide every aspect of medical care freely and independently, without interference from anyone. In this way doctors will know exactly what is available for medical services to be rendered. There will be no cut-rate bargaining between medical schools and their graduates. The outdated precedent of expecting medical serv-

ices for nothing or less than legitimate costs will be eradicated; and the community will, once and for all, appreciate the fact that medical care is an important commodity, which should be measured and paid for by society as a whole; the major burden must not be borne by the medical profession alone. —*The Private Physician*, Sept., 1934.

Legal and Illegal Aspects of Plastic Surgery*

THOSE who identify plastic repair with face lifting and the correction of nasal malformations, take a mistakenly narrow view of its scope. Plastic surgery deals with the repair of deformities of the skin and underlying soft tissues all over the body. In the case of abnormalities of the nose and jaw, it works with the bony framework also. Its goal embraces normal physiology, as well as normal anatomy.

The law, today, is guilty of both sins of commission and sins of omission, with respect to plastic surgery. It is too kind to the unqualified cosmetician and does not extend adequate protection to reputable reconstructive surgeons.

There are at least three procedures, in frequent use by irresponsible "beauticians," that should be banned, if not by statutory enactment, then by heavy penalties for the damage they inflict. These are caustic peeling of the skin for "rejuvenation"; epilation by x-rays; and the eradication of wrinkles by paraffin injections.

The indifference of the law to these dangerous practices is in striking contrast to the active hostility that reputable plastic surgeons sometimes encounter in the courts, if they are unfortunate enough to appear as defendants in malpractice actions. Although the correction of deformity of any kind falls within the statutory definition of the practice of medicine, in all too many instances the reparative surgeon goes into court without the moral sanctions that, in similar circumstances, surround the surgeon who has operated to eradicate disease. Once a deformity has been diagnosed and social, psychic or economic reasons established for its correction, the plastic surgeon should stand in exactly the same light, before the law, as any other physician.

The legal definition of deformity should be clarified, to establish more precisely the indi-

cations for surgical repair. In addition to malformations that impair function or gross disfigurements that clearly impede social and economic success, there are slight abnormalities whose influence on psychic health depends on individual temperament and mentality. A careful psychic appraisal is necessary to determine whether operation is advisable in such cases.

Once the diagnosis of deformity rests on more definite principles, a moral force will attach to justifiable reconstructive operations that must make itself felt in the courtroom when the charge of malpractice is raised against a reputable plastic surgeon. There are three main types of malpractice actions: In the first, surgery has effected a definite improvement, but the patient's exaggerated expectations have not been realized; in the second, the surgeon has failed to effect an improvement, through no fault of his own, because of some constitutional idiosyncrasy in the patient or an inherent and insurmountable difficulty in the case itself; in the third, not only is the deformity uncorrected, but complications set in, producing additional disfigurement and resulting, perhaps, in disability or death. If the diagnosis of deformity was properly established and the surgeon has taken the usual precautions and displayed reasonable skill, he should be held blameless for an adverse result, just as the curative surgeon is in similar circumstances.

The psychic, social and economic values of plastic surgery are particularly marked in adolescence and early maturity. Lack of understanding, on the part of parents, of the violent reaction to deformity frequently drives young people to quacks. If they are minors and lie about their age, the surgeon is under the onus of having operated on a minor without his guardians' consent.

Juries take cognizance of the social and economic consequences of deformity by granting large awards when a claim of permanent disfigurement is made. Indemnity should be granted in such cases only after expert repair has accomplished all it can to eradicate the malformation. The possibilities of scar removal should be given due consideration in every case in which the claim for damage rests on this ground.

A more precise understanding, among lawyers as well as doctors, of the indications for surgical repair and its great potentialities, would materially advance human happiness and justice.

JACQUES W. MALINIAC, M.D.

Newark, N. J.

*Author's abstract of a paper read before the Society of Medical Jurisprudence, New York, Nov. 13, 1933.

THE SEMINAR

(NOTE: Our readers are cordially invited to submit fully worked up problems to the Seminar and to take part in the discussion of any or all problems submitted.)

Discussions should reach this office not later than the 5th of the month following the appearance of the problem.

Address all communications intended for this department to The Seminar, care CLINICAL MEDICINE AND SURGERY, Waukegan, Ill.)

Problem No. 10 (Surgical—?)

Presented by Dr. Winfield Scott Pugh,
New York City.

(See CLIN. MED. & SURG., Oct., 1934, p. 486)

RECAPITULATION: A woman of 33 years had a left nephrotomy for stone and left the hospital in ten days, apparently well.

Three months later, not having menstruated during the interval, she had a violent, stabbing pain in the left lower abdominal quadrant, which subsided in a few minutes.

On examination, her skin and lips were practically colorless; her pulse thready; her breasts tender, and also the left lower quadrant. Her cervix was soft; uterous not enlarged; and a sensitive mass was present in the left vaginal fornix; hemoglobin, 45 percent.

Requirement: Suggest probable diagnosis and indicated treatment.

Discussion by Dr. I. E. Crack,
Hamilton, Ont., Can.

There seems to me to be no connection between this woman's present illness and the previous kidney disease.

The present emergency is, no doubt, a ruptured ectopic pregnancy. In favor of this is the absence of menstruation, tenderness of the breasts and softening of the cervix. The symptoms and physical findings all fit into the picture.

Treatment: Transfusion and abdominal section.

Discussion by Dr. John H. Gilmore, Chicago

While the previous history of nephrotomy must be considered, I believe that it may be discarded as not pertinent to the complaint presented.

The appearance of the patient and the described character of the pulse indicate, most probably, intraperitoneal hemorrhage. The history of the sudden onset, the type of pain, the fact that there had been no menstruation for three months past, and the physical findings of abdominal resistance, soft cervix, a mass in the left vaginal fornix, sensitive to

pressure and of considerable size and, I imagine, somewhat "doughy," with hemoglobin 45 percent, further supporting the possibility of hemorrhage, indicate, I believe, a diagnosis of ruptured ectopic pregnancy on the left, with rather severe hemorrhage, and the patient may justifiably be operated upon immediately. Probably the culdesac will be found full of free blood, accounting for the slight fullness noted on the right side, in addition to the findings on the left on the vaginal examination.

Discussion by Dr. E. C. Junger, Soldier, Ia.

There is no question that this problem is surgical! If shock is present, measures should be taken to combat it.

A soft cervix, without uterine enlargement; missed menstrual periods; a sensitive mass in the left vaginal fornix; severe pain in the left lower abdominal quadrant, ceasing rather abruptly with ensuing shock, pallor and thready pulse, can mean nothing but a ruptured tubal pregnancy.

Combat shock and operate at once!

Discussion by Dr. Herbert J. Wing,
Maywood, Ill.

The history and findings as given would tend to make one minimize the nephrotomy and concentrate on the pelvis. On considering the anatomy involved, particularly the relation of the ovarian and renal vessels on the left side, it would not be very difficult to see the connection between the past history and the present complaint.

The fact that there was no menstruation since the operation is not easily interpreted without the past menstrual history, but it could point to an ovarian disturbance due to defective circulation in the ovary, as a result of accidental injury to a regular or accessory left renal vessel. Ovarian dysfunction could also account for the finding of a soft cervix and apparently normal uterus.

While additional history and findings would be of benefit, the hemoglobin test tells its own story, and also indicates the course to be followed. The abdominal masses felt in the pelvis on both sides could be interpreted as

extravasated blood. A ruptured abdominal pregnancy would present much the same findings as have been set forth, but my probable diagnosis would be a ruptured left ovarian vessel, with no attempt or need to distinguish between a ruptured varix and a ruptured aneurism.

Treatment would, of necessity, be emergency, with immediate transfusion or infusion and pelvic laparotomy.

**Discussion by Dr. Geo. B. Lake,
Waukegan, Ill.**

This problem gives a practically typical picture of a ruptured ectopic pregnancy and calls for prompt surgical intervention.

This note is chiefly to call attention to the importance of giving this patient a blood transfusion immediately after the operation, if a suitable donor is available and other conditions make it practicable. If not, everything should be in readiness to begin dextrose-saline phlebotoclysis as soon as the patient leaves the table.

If the surgeon feels that the increased blood volume and pressure resulting from these measures will not increase the hemorrhage, and if it seems warrantable to wait until they can be arranged, it might be well to institute the transfusion or the intravenous infusion before operating. Otherwise it is better to wait until the bleeding vessels are secured.

**Discussion by Dr. Chas. H. J. Barnett,
Philadelphia, Pa.**

This case is an interesting one because of its importance, for to save life it is necessary to work fast.

Here is a woman 33 years old, who has not menstruated for 3 months (since operation), with a sudden pain and mass in left side, along with skin and lips practically colorless. This is indicative of but one thing—internal hemorrhage—in this case caused by extrauterine pregnancy which has been ruptured. Treatment must be immediate operation and ligation of the bleeding vessel.

I hope that every doctor will read and re-read this history and will never forget this picture, as I nearly lost a case of this type once, because I realized the trouble only just in time to save a life.

**Discussion by Dr. John B. Woodville,
Lansing, W. Va.**

This problem, while in itself surgical, is of especial interest to the general practitioner, because he is usually first to encounter these problems and, as a matter of life and death, should be prepared to make, promptly, an intelligent diagnosis and place the patient in the hands of the surgeon.

In the symptoms presented, we have a picture of sudden, severe internal hemorrhage, and the question is, to locate its source. Nephrotomy three months past, with the patient leaving the hospital ten days after, ap-

parently in good condition, eliminates the probability of any connection between the kidney operation and the present trouble. Pain of short duration, without vomiting, and localized over the left lower quadrant, is not indicative of perforated peptic ulcer.

Considering ruptured ectopic pregnancy, we have the following points in its favor: The patient had not menstruated since the kidney operation (three months); violent stabbing pain in the lower quadrant, with collapse; sense of resistance over the left lower quadrant, with slight pain; both breasts sensitive to touch; cervix soft, with the uterus not enlarged; mass in the vaginal fornix, sensitive to pressure.

Diagnosis: Ruptured left tubal pregnancy, with internal hemorrhage and shock.

Discussion by Dr. M. Gleason, Mendota, Ill.

The history and physical examination obtainable in this case point to but one condition—*ruptured ectopic pregnancy*. The exact position of the fetus, in the ovary or tube, is of minor importance in the presence of a severe abdominal hemorrhage such as is present here. The immediate necessity for surgical interference is obvious.

If the patient's condition does not warrant immediate operation, due to shock, I would advise a blood transfusion, to be started simultaneously with the operative procedure. The reason for them to be commenced simultaneously is to give the operator a chance to secure the point of hemorrhage, so as not to allow the transfused blood to be lost in the abdomen. If the bleeding point is stopped and the transfused blood kept in its circulatory apparatus, shock will be overcome much more quickly than by trying to leave it to the peritoneum for absorption. The post-operative condition will be that of shock, and frequent hypodermoclysis should be given.

**Discussion by Dr. Oswald C. J. Withrow,
Toronto, Canada.**

The question mark following the word, "Surgical," is very apropos. The problem is obstetric-gynecological (ought these ever to be divorced?) and, in this instance, is surgical.

Another interesting sidelight is that the family physician—and this is no rare specimen—had his attention drawn from the main issue by the recent nephrotomy.

The train of symptoms and signs is significant and sufficient:

1. Violent, stabbing pain, subsiding soon; then a quiet patient.
2. Marked anemia.
3. Feeble, almost non-existent pulse.
4. Amenorrhoea for three months.
5. Sensitive breasts.
6. Lower left abdominal resistance.
7. Softened cervix.
8. Uterus normal in size.

9. A mass in the left vaginal fornix.

This is an almost complete picture of a ruptured ectopic gestation. The treatment is immediate operation, with removal of the ruptured fallopian tube, followed by blood transfusion, if required.

The only sign needed to complete the picture (absent in this case, or not noted) is the discharge of a bit of decidua from the uterus.

Discussion by Dr. Theo. H. Maday, Chicago.

The appearance of the patient—skin and lips practically colorless and lying quietly—indicates shock and, from the pulse, which was a “mere trickle,” shock due to internal hemorrhage.

The history of the case—violent, stabbing pain in the left lower quadrant, subsiding in a few minutes—points to a hemorrhage in the pelvis, which caused cessation of the pain.

From the further history—no menstruation since her kidney operation, and the physical finding of breasts sensitive to touch; a sense of resistance over the left lower quadrant, with slight pain and a soft cervix and a normal sized uterus; a sensitive mass in the left vaginal fornix; and a hemoglobin percentage of 45—one can draw only one conclusion: hemorrhage from a ruptured tubal pregnancy of the left tube. The rupturing of the tube caused the pain; the ensuing hemorrhage caused a cessation of pain, and was the cause of the shock and rapidly increasing anemia.

Treatment: Immediate laparotomy.

The ruptured tube must be removed, all bleeding points secured, clots removed, suitable drainage placed, and a blood transfusion, which in this case is very urgent, given as often as is indicated.

**Discussion by Dr. E. O. Houda,
Tacoma, Wash.**

Brief as the clinical history is in this case, it appears to be a classic picture of internal hemorrhage due to rupture of a vascular structure. With no menstrual flow for three months, during which time the breasts became tender, together with the pelvic masses, a soft but not particularly enlarged uterus, this case appears typical of ruptured ectopic gestation. An urgent laparotomy was done, no doubt, when one look was worth more than two feels and four guesses. There was no relationship of the condition to the stone operation of three months before.

In less typical cases, if milk can be expressed from the nipples about ten days after an acute pelvic pain, I find this sign most positive for an interrupted extra-uterine pregnancy. About the tenth day milk is present in the breasts of these women, even if gestation did not progress beyond a few weeks.

Solution by Dr. Pugh

A laparotomy was performed without delay, and a ruptured tubal pregnancy was found,

with the abdomen full of blood. The patient made a stormy, but otherwise satisfactory, recovery.

Problem No. 12 (Medical?)

**Presented by Dr. Isaac E. Crack,
Hamilton, Ont., Can.**

MRS. F. L. G., aged 50 years, had a cholecystectomy about twenty years ago, because of frequent attacks of gall-stone colic. Before she was out of the hospital she had an attack of pain similar to what she had experienced before the operation. These attacks, during the subsequent fifteen or sixteen years, occurred occasionally, with long intervals between them.

She came under my care about four years ago, when she was having frequent attacks of very severe abdominal pain, with tenderness in the area of the operation scar. With these seizures there would be chills, with a temperature from 100° to 103°F., clay-colored stools and very marked jaundice. The attacks, when relieved by morphine, would clear up in a few days, but the intervals between them became shorter until, in Nov. 1932, she was having only about ten days' rest between them.

My diagnosis at that time was a stone impacted in the common duct. The surgeon, who removed the patient's gall-bladder eighteen years before, agreed with me and advised operation. This was done in Dec., 1932, but no stone could be found. The common duct was free from any obstruction. The woman had a very serious time following operation, with several hemorrhages, and for several days we thought she would die. She eventually recovered and was very well for about six months, since which time all previous symptoms have returned and are now coming on with shorter intervals between them. During the latest attack, her temperature went to 104°F., with chills and vomiting, and she had some sort of a convulsive seizure. When I reached her she was in coma, with slow, stertorous breathing and a pulse rate of 90. She recovered consciousness in about ten minutes, when her pulse went to 140.

The urine, aside from bile pigment, was normal, and the blood chemistry examination, on the day of the seizure just mentioned, was normal. There was both a direct and an indirect positive van den Bergh reaction. All forms of diet have been tried and, on the advice of a consultant, she was given calcium chloride intravenously, with no apparent benefit.

Requirement: Suggestions as to the cause of the attacks and advice as to their treatment. What, if any, further information is needed to make a diagnosis?

CLINICAL NOTES and ABSTRACTS

Palliative Treatment of Cancer with Hydrochloric Acid

A FEW years ago I began to read articles by Dr. Burr Ferguson in a number of journals reporting satisfactory results in a wide variety of infections, following the stimulation of the white blood cells, usually by the injection of solutions of hydrochloric acid. Since my laboratory resources are not such that a check could be made on the reported cellular changes, and the clinical observations were so at variance with my own experience of almost fifty years, I was forced to think that enthusiasm had distorted fact.

Something over a year ago I found my skepticism was shared by the editor of the *J. A. M. A.* In response to a query about the hydrochloric acid injections in the treatment of asthma, a colleague in Brooklyn was advised that a great inflammatory reaction followed the injection of the acid, this reaction being induced by a pronounced hemolysis. Consequently the procedure was dangerous and the writer of the query and all physicians were advised never to jeopardize their reputes by its use.

It seemed to me that this opinion violated all the rules of evidence, in that the writer reported no specifically untoward consequences. No injuries nor deaths were mentioned. Hence, being governed by a sense of fair play, I began an exchange of letters with Dr. Ferguson. Replies to my letters were altogether of a kind with the papers I had read, so I began the use of the acid injections in the various strengths, as advised. In furunculosis, wounds and pyogenic infections, I found the results quite as positive as I had been told they would be. I also found satisfaction in its use in infections of the uterus and in asthma.

In one of my letters to Dr. Ferguson I asked what might be expected from its use in cancer. In the reply he told me that he used the acid injections in all malignant conditions he had an opportunity to see, because the blood was said to be too strongly alkaline in these conditions, and that, with the regular injection of the hydrochloric acid, pain was lessened, bleeding was decreased, appetite was improved and the regular use of morphine was not found necessary. However, he told me that he had never seen the

lesion disappear and in no way could it be considered as a "cure."

Late in June, the opportunity came for an application of this plan in the treatment of a post-operative case of carcinoma of the left breast, in a woman fifty years of age. She was referred to me because of an unhealed area about two inches in diameter which was a sequel of a radical operation done in San Francisco early in May. This lesion was promptly healed by the use of balsam of Peru, iodoform and castor oil.

Dissection of the lymphatics in to the axilla and fascia under the breast had been thorough. This procedure, coupled with the thorough use of x-rays preceding the operation, was followed in July, as was expected, by distressing pain. This almost constant accompaniment of advanced malignant disease rapidly grew worse, and soon pains in the hand, arm and breast were so persistent that her sleep was most fitful. The patient was averse to morphine and so, on the 28th of July, I determined to make a test of the intravenous injection of 10 cc. of hydrochloric acid 1:1,000, and to repeat the injection on the following day. To my very great delight she reported a good night's sleep after the first injection of the acid, and complete relief from the pain after the second injection.

After this, three injections of the hydrochloric acid were given each week. The beneficial effects continued, and about the middle of August I increased the strength of the acid solution to 1:500, decreasing the amount given to 5 cc. She slept well, had a hearty appetite and looked much better than she did when I began the injections of the acid. So satisfactory to me has been this relief of the distressing pain, and so constant does the improvement seem to be, that I shall try making the interval between injections somewhat longer. The result must be attributed to the injections of the acid, as no other medication of any kind has been used.

This report is being written in October and, so far, the behavior of this case has been all that I had been told it would be by Dr. Ferguson. As a matter of fact, his prognosis has been too true to please me, because two nodules of the malignant process have now

appeared, one on the skin of the chest wall and the other in the axilla. Of course there will be an extension of the process through the lymphatics, with swelling of the arm and eventually death. Basing my opinion on the observations of this case so far, I am firmly of the belief that, under the influence of the hydrochloric acid injections, her last months of life will be made much more comfortable than they would have been without the acid injections.

For fifty years I have witnessed therapeutic changes. I have seen ideas come and go—a myriad of drugs, serums and specifics—and as a rule I have followed the fashion of the time. In all this experience, never have I known a procedure, the use of which was attended by such satisfaction as that following the intravenous injection of hydrochloric acid. The reasons for these results, as given by Dr. Ferguson, may be true or false, but as a clinician reasons are more or less immaterial to me, in that my patients are made more comfortable and, in many cases, entirely relieved of their ailments.

M. A. CRAIG, M.D.

Lakeport, Calif.

The Blood Sedimentation Test, Especially in Pulmonary Tuberculosis*

IT is being generally accepted that the phenomenon of increased sedimentation rate of the blood depends upon an abnormal amount of cellular destruction going on in the body. The test for increased sedimentation rate is absolutely nonspecific. It is, however, a valuable and useful diagnostic aid, used more especially in gynecology and tuberculosis. One writer says that it is a most delicate and sensitive reaction, which reflects very faithfully the state of equilibrium of the blood in relation to any pathologic process. Its uses as a specific diagnostic agent are almost limited to the domain of tuberculosis, where it may be employed in conjunction with a small provocative dose of tuberculin. Used cautiously, however, and as an adjunct to the clinical picture, the sedimentation test, if correctly interpreted, will be found to possess great value.

In my own experience, based mainly upon 272 patients in whom a total of 552 sedimentation rates were made, 204 of the patients showing diagnosticable tuberculosis, I have come to rely greatly upon it, feeling that it reinforces physical, radiologic and symptomatic evidence and that it frequently presages oncoming evil, or, on the other hand, gives one confidence in the ultimate outcome when clouds loom dark on the clinical horizon.

**An. Intern. Med.*, 8:258, Sept., 1934.

The sedimentation test is not a substitute for any existing clinical or laboratory procedure, but is complementary to them; it is not infallible, but neither are the majority of laboratory procedures. Very rarely (in less than 1 percent) a normal rate will be found in the presence of active clinical disease.

PAUL H. RINGER, M.D. AND MARY ROACH
Asheville, N. C.

Venereal Diseases Not Reported

IN the August, 1934, number of *CLINICAL MEDICINE AND SURGERY*, you suggest, in the article on Syphilis in the *Medical News* column, that there is something wrong with the states reporting a very low incidence of syphilis and gonorrhea.

May I suggest that perhaps the difficulty lies in the medical profession. I say this because of conditions in the county (Dawson) in which I practice. I heard (at a county medical meeting a few years ago) most of the busier practitioners say that they never pretended to report a case of either disease. Furthermore, I have generally failed to receive reports when patients change physicians during the treatment, as they occasionally do.

I do not pretend to know what can be done about it, but my own experience, here as well as in other localities, leads me to believe that a similar attitude will often account for a low reported incidence of these diseases.

RAY S. WYCOFF, M.D.

Lexington, Nebr.

[One of the duties of the physician who desires to be classified as a good citizen is to report births and contagious diseases, promptly and accurately—he *has* to make out a death report before the corpse can be buried, but frequently that is a farce.

States showing ridiculously low morbidity rates for venereal diseases are probably advertising slipshod methods of their physicians, and all vital statistics should be scrutinized from that viewpoint, to see what one can read between the lines.—Ed.]

The Significance of Ocular Symptoms*

PAIN in the eye of sufficient severity to prevent sleep, associated with redness of the eye, suggests iritis, glaucoma, a foreign body or abrasion of the cornea. The condition of the pupil enables a diagnosis to be made between iritis and glaucoma—small in the

**E. E. N. and T. Monthly*, Sept., 1933.

former; dilated in the latter. Pain due to a foreign body or abrasion is intense, but spasmodic, coming on with movement of the eyelids. Severe pain in an eye which is normal in appearance may be a prodromal symptom of ophthalmic shingles. Pain referred to the back of the eyes, coming on at once when any close work is attempted, may be due to an error of refraction or to neurasthenia. Discomfort about the eye, with a feeling of gravel or grit in it, indicates conjunctivitis.

Headache of ocular origin is common in school life and up to middle age, but it is usually a mistake to attribute headache in a person over fifty to eye-strain. Ocular headache is usually frontal or supraorbital, but may occur at the back of the neck, where it joins the head. It frequently occurs on waking, gets better or disappears after breakfast, and returns as the day ends, but does not interfere with sleep. Ocular headache is usually due to excessive accommodation necessitated by hypermetropia. Astigmatism of low degree is also a common cause. In migraine, the symptoms are strikingly ocular in character, but it is the central nervous system that is at fault.

Common subjective symptoms are seeing floating specks, colored rings around light, and flashes of light. Night blindness, color blindness, seeing worse in a bright light, and red vision are also common symptoms. Seeing colored rings around light may indicate a watery eye or simple conjunctivitis, or be due to cyclitis, or may indicate that detachment of the retina is imminent. Night blindness usually indicates impaired nutrition or actual destruction of the retinal elements. It may be a symptom of retinitis pigmentosa or syphilitic retinitis. It may also be experienced by very long-sighted people who wear strong convex glasses in the daytime. Seeing worse in a bright light usually occurs after forty-five and suggests tobacco neuritis or early optic atrophy. Color blindness is usually a congenital symptom. Acquired color-blindness may indicate tobacco neuritis or beginning optic atrophy. Red vision occurs in young school children, and in adults after a cataract has been removed and cataract glasses have been worn. It is due to the retinal vessels being traversed by light rays on their way to the rods and cones. The child should have the error of refraction corrected; the cataract patient should avoid strong glare and use tinted glasses.

Headache, head-tiredness, general fatigue and irritability of temper may be symptoms due to refractive errors and defects in accommodation.

Presbyopia, under average conditions, begins at age forty-five, and by sixty all accommodative power is lost. This means that reading glasses suitable for sixty should be suitable for the rest of life. When people

over sixty begin to grumble at their glasses and demand stronger ones, the complaint is significant of some organic change in the eye, most likely early cataract; possibly senile choroiditis.

Double vision should always be regarded as serious, unless it is confined to one eye. It may indicate the beginning of serious disease of the central nervous system. A temporary form of double vision occurs, sometimes, after the eyes have been used for close work, and is not serious. Multiple vision always signifies some early change in the lens. If accompanied by "second sight"—an apparent improvement in vision—it may be due to glycosuria.

Having to close one eye to read may indicate disease of that eye, but is frequently due to weakness of the power of convergence—a common condition in elderly people.

Vomiting may be due to glaucoma or to the use of too-strong eserine drops. Atropine or hyoscine drops, in susceptible persons, may produce symptoms of general poisoning—giddiness, restlessness and even delirium. To diminish the risk, the drops should be instilled at the outer canthus.

Papillitis (optic neuritis) may exist for a considerable time without producing any effect on vision. The fundus should be examined in all cases of persistent headache. If temporary obscuration of vision occurs in the course of pregnancy, associated with albuminuria, an examination of the fundus should be made at once. Termination of pregnancy may prevent permanent loss of sight.

PERCY FLEMMING, M.D.

London, England.

Metabolic Factors in Chronic Arthritis*

THE etiologic and pathologic factors productive of arthritis are many. The syndrome is characterized by imbalance of at least three, if not four, of the major systems of the body.

Prominent among these is the gastrointestinal tract, which suffers imbalance and dysfunction of a demonstrable nature. Correction of these depends upon a broad and coordinated program, in which properly balanced and restricted dietaries play an important part.

Recent studies show that the swelling of the soft tissues, which accompanies chronic arthritis, is referable, in part at least, to a condition resembling a low-grade edema. Further justification for the use of balanced and restricted dietaries is to be seen in the extent to which, in a sustained way, these

*A. J. Digest. Dis. & Nutrition, Sept., 1934.

draw upon the water reserves of the body and promote subsidence of this tumefaction.

The edema mentioned is also open to modification, or correction, by measures which promote equilibrium in the finer vascular system, such as is afforded by recumbency, associated with physical therapy and postural exercises.

The available evidence suggests that at least part of the stiffness and pain characterizing arthritis is referable to the excess fluids confined within limiting membranes of various kinds.

RALPH PEMBERTON, M.S., M.D.

Philadelphia, Pa.

The Use of Maggots in Suppurative Infections*

MAGGOTS feed only on the surface or in shallow openings. It is essential that they be given access to all infected parts, and thorough exposure of the infected tracts at the time of operation is therefore advised.

As maggots do not function well in the presence of blood, it is advisable to use vaseline gauze when packing the wound, as it reduces hemorrhage when the packing is removed. Any tendency to wound closure during the treatment should be checked; as the maggots feed only on devitalized or necrotic tissue, this forces them to seek the deeper parts.

The exposed skin about the wound should be protected from irritation by maggots attempting to escape. A wire gauze screen is usually employed, but protection of the skin from crawling maggots and wound secretions can be better obtained from the use of Unna's paste†, which fastens the cage down also.

As maggots will not function in the presence of excessive wound secretions and usually die in the wound if such secretions are not removed, adequate drainage is, therefore, of especial importance.

The best way to get maggots to work in the deeper infected sinuses is to expose these tracts surgically and keep them free from secretions. One of the chief reasons for the trouble caused by the early closing of the wound under maggot treatment is undoubtedly inadequate drainage.

The number of maggot implantations (as well as the quantity of maggots implanted) will vary with the progress of the wound. It may range from 3 to 20 or more. It is often advisable to allow the patient a day's rest between implantations.

WILLIAM ROBINSON, M.D.

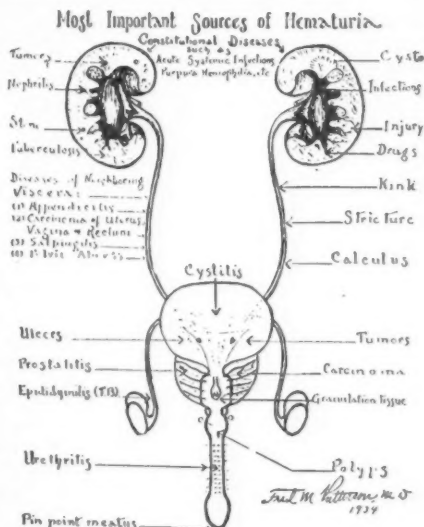
Washington, D. C.

**Am. J. Surgery*, 25:552, Sept., 1934.

†The formula for Unna's paste is: Zinc oxide, 2½ parts; gelatin, 6¼ parts; glycerin, 19 parts; water, 19 parts.

Sources of Hematuria*

WHEN blood appears in the urine, many physicians have no very clear idea regarding all the sources from which it may come, and therefore their examination and diagnosis may be incomplete and their treatment correspondingly unsuccessful.



I have prepared a diagram showing the locations of the most important sources of hematuria, which is presented here, in the hope that it may prove suggestive and helpful. One new cause of this symptom—pin-point meatus—is included.

Accurate diagnosis in these cases calls for a thorough history and general examination, and frequently for a complete urologic study.

FRED M. PATTERSON, M.D.

Greensboro, N. C.

Ovarian Cyst in a Young Girl (A Case Report)

MISS J. F., age fourteen years, a well developed and previously healthy girl, was seen by my colleague on September 6, complaining of intermittent pain over the lower abdomen, coming on at regular intervals from five to fifteen minutes apart. I saw her the night of September 7 and ordered morphine to control the pain, which was then continuous. She maintained that she had menstruated regularly and had noticed no swelling of the abdomen.

**Southern Med. & Surg.*, July, 1934.

Examination: Roentgenography of the abdomen was negative, with no bony detail of a fetus made out, though the abdomen was the size and shape of a six-months' pregnancy. The leukocyte count was 29,600 per cubic mm.; urine analysis was negative; the breasts were normal; cervix very slightly open but firm; the hymen was not intact; the abdomen was rigid over the entire lower pelvis, with tenderness and rebound tenderness over entire lower abdomen, especially over McBurney's point. Her temperature was 102°F.; and pulse, 112.

Diagnosis and management: Pre-operatively, I made a diagnosis of a twisted pedicle of an ovarian cyst, which I verified at operation. The cyst contained about six quarts of fluid and the sac was engorged. The pedicle was turned on itself as a rope would be braided. The patient progressed nicely following the operation.

THOMAS A. LOWE, M.D.

So. St. Paul, Minn.

First Aid In Poisoning*

A FEW years ago we drew up the following sheet of "first aid instructions" for poison cases, for the use of the emergency service of the Baptist Hospital, New Orleans. This sheet has met most of the requirements for this class of service. We give it here in the hope that it may be of some interest.

Poisoning—Emergency Treatment

Inorganic Acids (Sulphuric, Nitric, etc.): Give magnesium oxide, ½ ounce, or milk of magnesia, 4 fluid ounces. If the patient is vomiting, keep repeating until the stomach has been thoroughly cleansed; if not vomiting, the stomach should be carefully washed, using a small tube. Give demulcent drinks, as cream or olive oil. Combat pain and shock if necessary.

Caustic Alkalis (Lye, etc.): Wash out the stomach (using extreme caution) with diluted vinegar or 1-percent acetic acid, using a small tube. Give demulcent drinks, as albumen water, cream or olive oil. Treat external burns with vinegar or diluted acetic acid and apply cold cream.

Arsenic (including Ant Poison): Wash out the stomach with "arsenic antidote" (freshly-precipitated, hydrated oxide of iron with magnesia). Leave 2 fluid ounces of this in the stomach. Give, intravenously, 10 cc. of a 5-percent solution of sodium thiosulphate. If ant poison has been taken, give a cup of strong tea also. Keep the body warm.

Hypnotics (Barbital, Luminal, etc): Wash out the stomach with sodium bicarbonate solution. Introduce through the tube a cup of coffee and 2 fluidrams of aromatic spirit of ammonia. Give a hypodermic injection of

7½ grains (0.5 Gm.) of caffeine sodio-benzoate. Keep the patient awake.

Iodine: Wash out the stomach with starch water—cooked if obtainable. Give 2 fluidrams of aromatic spirit of ammonia in water.

Mercury (Corrosive Sublimate; Bichloride Tablets): Wash out the stomach with the white of eggs mixed with water. Leave some of this in the stomach. Give, by mouth, 30 grains (2 Gm.) of sodium thiosulphate dissolved in water. Give, intravenously, 10 cc. of a 5-percent solution of sodium thiosulphate. Treat pain as indicated—1 grain (0.065 Gm.) codeine phosphate by hypodermic injection, if necessary.

Nux Vomica (Strychnine): Give, intravenously, 7½ grains (0.5 Gm.) of a soluble barbiturate, such as soluble barbital or sodium amylal. Repeat as needed. May use chloral hydrate and sodium bromide by rectum. Wash out the stomach with a 1:3,000 solution of potassium permanganate and leave a pint of this in the stomach. Keep the patient quiet.

Opium (Morphine and Codeine): Wash out the stomach with 1:3,000 potassium permanganate solution (2½ grains—0.162 Gm.—to the pint). Leave a pint of this in the stomach. Give 7½ grains (0.5 Gm.) of caffeine sodio-benzoate by hypodermic injection and repeat in 30 minutes. After washing out the stomach, give a cup of strong tea and 2 fluidrams of aromatic spirit of ammonia. Keep the patient awake.

Phenol (also Lysol and related preparations): Wash out the stomach with a 20-percent solution of alcohol; then with sodium bicarbonate solution. Give ½ ounce of sodium sulphate in saturated solution. Give demulcent drinks, such as cream or albumen water (the white of an egg to each glass of water). Put the patient to bed and keep the body warm. Combat shock, if indicated. Sponge external burns with alcohol solution and apply cold cream.

Wood Alcohol: Wash out the stomach with a 2-percent solution of sodium bicarbonate. Keep the patient quiet. Treat symptomatically.

OSCAR W. BETHEA, M.D.

JAS A. BRADLEY, M.D.

J. G. LILLY, M.D.

New Orleans, La.

"Acute Surgical Abdomen"*

IF it were possible to take a cross section view of the average signs and symptoms of an acute surgical abdomen, some twelve hours or so after the onset of the illness, we would find a patient who would tell a story of an onset of pain in the abdomen, the pain localized and gradually getting worse; a story of some nausea and vomiting, and of constipation. We would find a patient with a tempera-

*Internat. Med. Digest, Dec., 1933.

*Med. Times, Sept., 1934.

ture around 100°F. by mouth, a pulse rate of 90 to 100, and with normal respirations. His face would be slightly flushed. His abdomen would show a localized area of tenderness, over which the abdominal muscles would be spastic and perhaps somewhat rigid; there might be a moderate amount of rebound tenderness and a little distention. Peristalsis would be diminished. A rectal examination might reveal no abnormalities. His white blood cell count would be approximately 12,000, and the differential count would show about 85 percent polymorphonuclear cells. His urine might be somewhat concentrated, but otherwise normal. Such a patient, in the absence of other findings, might well be said to have an acute surgical abdomen.

JAMES W. BULMER, M.D., F.A.C.S.
Glen Cove, N. Y.

Minimizing Neonatal Weight Loss*

THE idea that newborn infants must lose a great deal of weight (about 7 percent) before they begin to gain, is without physiologic basis. When such loss occurs, it is due to dehydration and semi-starvation, and can be reduced to about 1.7 percent by beginning, immediately after birth, the feeding, at two-hour intervals throughout the 24 hours, of a solution containing 6 percent gelatin (pH 6.2), 3 percent dextrose and 0.5 sodium chloride, having a caloric value of 12 calories to the ounce. As breast or artificial feeding begins, this solution is used as a supplement.

The method of preparing this solution is as follows:

To a cup of cold sterile water add about 6 level tablespoonfuls of gelatin (pH 6.2), about 3 level tablespoonfuls of dextrose and about a level teaspoonful of table salt. The gelatin should be free from flavoring, coloring or sweetening, if it is to be well borne as the first nutrient of the new-born. Allow it to soak for ten minutes. The remaining 3 cups of water required to make a quart of the solution are brought to the boiling point and added slowly to the mixture. The solution is stirred continuously until all is dissolved.

I. NEWTON KUGELMASS, M.D.
and

RUTH E. L. BERGGREN, M.A.
New York City.

Not Enough Milk Used

DESPITE the fact that modern science has demonstrated, in a long series of brilliant investigations, that pure milk is indispensable to adequate human nutrition, and that the dietary qualities of dairy products surpass those of practically all other foods, the average American consumes too little milk. In

*Transactions of Sect. on Pediatrics of A. M. A., 1933.

1933, for example, the annual per capita consumption of fluid milk and cream in this country was only 38.8 gallons, or 0.85 of a pint a day.

Scientists who have worked out the mass food requirements of the American people on a careful nutritional basis declare that, even in a restricted diet for emergency use, 155 quarts, or 38.75 gallons, of milk are necessary for each person in the course of a year. Today our people are, therefore, barely living on a restricted and meager milk diet.

For an adequate diet at minimum cost, not less than 260 quarts, or 65 gallons of milk, or its equivalent in other dairy products, is advised. For an adequate diet at moderate cost, or for a liberal diet, the per capita figure is set at 305 quarts, or 76.25 gallons of milk annually.

The favorable influence on healthful longevity of the regular consumption of optimum amounts of pure milk is now as well established as is the unfavorable effect on infant and general mortality of impure and contaminated raw milk. Investigations in Scotland have demonstrated that children who have extra milk, either pasteurized or raw, gain in height and weight over those who do not. A study conducted by British medical officers in Africa showed that the males of a milk-and-meat-eating tribe were taller, heavier and had greater muscular strength than the males of another tribe that lived on vegetarian fare and no milk.

Despite the fact that the best informed authorities on nutrition, including government officials, professors and physicians, universally advocate the expenditure of from one-fifth to one-third of the family food budget on milk, the actual expenditure for this indispensable food is now only about one-tenth of the average American food budget. The fraction now allotted to milk could be doubled without increasing the daily expenditure for food.

Where fluid milk is unavailable, or the supply is of questionable purity, the public can always secure the concentrated milks, including the evaporated, powdered and condensed, the nutritive properties of which are equivalent to pasteurized fluid milk.

JAMES A. TOBEY, Dr.P.H.

New York City.

Wheat Bran As a Laxative*

WE studied the laxative values of commercial wheat bran, a processed bran product, and a mixed diet of fruits and vegetables, in a group of six male patients exhibiting varying degrees of constipation.

In all but one instance, the commercial bran and the processed bran product, when fed in such amounts (determined by chemical analy-

*J. A. M. A., March 18, 1933.

sis) as to bring the daily fiber intake up to 90 mg. per kilogram of body weight, were very efficacious in correcting the constipation, in contrast to fruits and vegetables, which proved to be satisfactory in only two cases. The commercial bran proved to be slightly superior to the processed bran, but was much less palatable.

In the three cases in which satisfactory laxation was not secured when the patient was subsisting on the diet of fruit and vegetables, addition of the processed bran product resulted in the desired improvement.

In each of the five cases that presented constipation without any other symptoms, we observed that the fraction of the fiber of the basal diet and of the fruits and vegetables that remained intact after passage through the alimentary tract was much less than was the case with healthy men studied in previous investigations and we suggest that the tendency to constipation that these patients exhibited was due to this fact. A diet of common foods that will suffice to promote satisfactory laxation in healthy persons evidently will do so in some of these patients, but not in all, and, therefore, the latter require some form of roughage that will resist all decomposition.

In one case, presenting the picture of so-called irritable colon, fibrous roughage in any form was contraindicated. Agar-agar, on the other hand, when fed so as to give a roughage intake of about 50 mg. per kilogram daily, gave very satisfactory results.

GEO. R. COWGILL, Ph.D. and

ALBERT J. SULLIVAN, M.D.

New Haven, Conn.

Colloidal Aluminum Hydroxide in Peptic Ulcer*

SYMPOMS of peptic ulcer are rapidly brought under control with colloidal aluminum hydroxide therapy. Since the treatment is easily followed, it quickly gains the patient's confidence. No toxic symptoms have been observed in any case.

The free acidity of the stomach is lowered after treatment with aluminum hydroxide, but returns to the initial level after the medication is discontinued. In contrast to sodium bicarbonate, aluminum hydroxide does not stimulate an increase of HCl output after its primary action.

Although aluminum hydroxide obviously serves as a gastric antacid, it is possible that its efficacy in the treatment of peptic ulcer may be dependent, in part at least, upon its slight astringent and demulcent properties and the fact that it appears to increase the secretion of mucin.

No contraindications for aluminum hydroxide therapy have been observed. The normal

content of aluminum in the blood is very small, and this content is not materially altered by the ingestion of large doses of alumina cream. Determinations of the total base, chloride, CO₂ content and pH of the blood have failed to disclose any disturbance in the acid-base balance which could be ascribed to this therapy.

DRS. I. H. EINSEL, W. L. ADAMS,
AND V. C. MYERS.

Cleveland, O.

Sterility in "Normal" Women*

IN 18 cases of sterility in apparently normal women, who had undergone all the ordinarily used treatments to relieve this condition without successful results, careful examination disclosed the fact that the os uteri was eccentrically placed and the cervical canal tortuous and very narrow.

Conception occurred in all these women following gradual dilation of the cervix with Hegar dilators, up to No. 14. Treatments were given once a week, and about two months were required for a complete series.

CHARLES H. BIRNBERG, M.D.

Brooklyn, N. Y.

Immediate Effects of Injections of Hydrochloric Acid

TWO cases I have recently treated show so clearly the immediate effects of intravenous injections of hydrochloric acid upon the cellular elements of the blood (as well as upon the patients' symptoms), that I wish to report them, briefly, although the treatment is not finished.

Mrs. X., a middle-aged woman, complained of "arthritic" pains and somewhat restricted motion in her shoulders, neck and arms. For nearly 25 years she had suffered from profuse metrorrhagia, which had not been relieved by curettage and fixation of the uterus, performed 22 years before I saw her. Her blood showed: red cells, 3,580,000; leukocytes, 8,300, with polymorphonuclears 60 percent; hemoglobin, 70 percent.

On October 3, I gave her an intravenous injection of 10 cc. of 1:500 hydrochloric acid solution; and the same dose daily until October 12.

After the first injection there was a pronounced increase in the pains (which is not unusual); on the fourth visit the pains had disappeared and she felt much better; after the eighth injection she had a normal menstrual period—the first in years; on October 20 she had gained seven pounds in weight and the blood showed: red cells, 3,990,000;

*A. J. Digest. Dis. & Nutrition, Sept., 1934.

*J. A. M. A., Oct. 13, 1934.

leukocytes, 6,900; hemoglobin, 75 percent. The treatment will be continued.

Mr. Z., a referred patient from Indiana, complained of an annoying sinus infection, which had not been benefited by climato-therapy. The sputum showed many leukocytes and shreds of fibrous tissue, but no tubercle bacilli. A roentgenologist reported, "Appearance of a non-tuberculous inflammatory condition, incompletely healed." His leukocyte count was 13,300, with 42 percent polymorphonuclears and 52 percent lymphocytes.

On October 18, I gave him 10 cc. of 1:500 hydrochloric acid, intravenously, and when he returned next day for another injection, he reported having had a comfortable night's sleep (which was unusual).

On October 20, he had his third injection, and his leukocyte count was 10,000, with 67 percent polymorphonuclears and 27 percent lymphocytes. I returned him to his family physician, with the recommendation that this treatment be continued.

BURR FERGUSON, M.D.

Birmingham, Ala.

Carbon Monoxide Poisoning*

THE symptoms of carbon monoxide poisoning resemble those of anoxemia produced in other ways. The outstanding difference is that there is a greater tendency to faint in this intoxication, which results in the exposed individual collapsing before realization of the danger he is in. There is always a lowering of the body temperature, but with fever on recovery; there is an increased pulse and respiratory rate at first, with a lowering of blood pressure.

The most effective plan of treatment is as follows:

- 1.—Either CO₂ (5 percent) and oxygen (95 percent) inhalation.
- 2.—Or, oxygen (pure) inhalation; from 20 minutes, in mild cases, to 3 hours in severe cases. Continue it until the CO is eliminated from the blood.
- 3.—Fresh air until or when the above two gases are not available. This may mean artificial respiration. Get the victim into fresh air as soon as possible.
- 4.—Absolute rest, lying down.
- 5.—Fluids, by rectum if necessary.
- 6.—Build up resistance; ample diet; force fluids, cathartics.
- 7.—Stimulants, as needed, using strophanthin, digitalis, strychnine or atropine with caution, as the heart is under stress.

I feel that the mixture of carbon dioxide with oxygen is better than oxygen alone. It

does three important things: (a) augments breathing and rapidly ventilates the blood; (b) stimulates the circulation, especially the venous; restores the arterial pressure more rapidly than other measures.

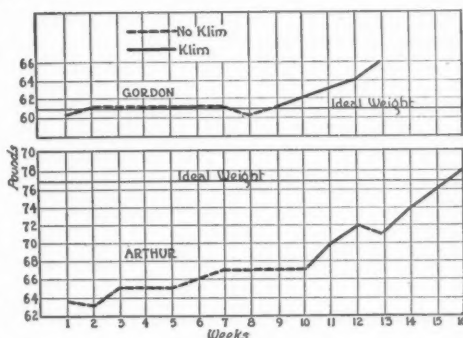
Regarding the use of mercurochrome intravenously, personally I feel it deserves clinical trial.

HAROLD M. F. BEHNEMAN, M.D.

San Francisco, Calif.

Rheumatism in Children*

RHEUMATISM in childhood is a serious matter, and children suffering from this disease should be kept under close observation.



Courtesy of The Dry Milk Co., Inc.

Fig. 1

There are many resemblances between rheumatism and tuberculosis. Both may be latent and make a sudden, dramatic appearance; both may require months to make a definite diagnosis; both may assume a generalized form; and in the treatment of both the importance of rest, fresh air, good food, careful hygienic management and instruction of the parents is greater than that of drugs.

The nutrition of the rheumatic child furnishes a problem. We feel it is essential, in combating a chronic infection, to improve the physical condition of the patient. Most of these children are suffering from that anoxemia which occurs with the absorption of toxins, plus an aversion to food caused by the constant urging, throughout many weeks, that they eat. All the various plans of dietitians, psychologists and pediatricians have been tried. Our most successful plan has been to start with small quantities on the trays and to demand that the tray be cleared before bed, play or amusement can take place.

We have tried all methods of fortifying the milk in order to increase the calories taken, such as cream, various malts, cocoa, etc., but we have found fault with all of them. Sugar is frequently poorly tolerated, heavy cream

*Northwest Med., 33:301, Sept., 1934.

*Illinois M. J., Aug., 1934.

mixtures produce nausea, etc. We have finally found that dry milk is our best method. We use from 4 to 12 tablespoonfuls to a quart of milk. It is well tolerated and the child acquires a liking for it instead of growing tired of it.

The accompanying chart (Fig. 1) was made simply to show what can be done to increase the feeding value by adding dry milk to whole milk. The figures on the lower line show the weeks. For nine weeks Gordon made no gain whatsoever. He was then put on Klim, a dry milk, and he gained satisfactorily from then on. The other child gained very poorly without fortified milk. Then he was placed on the dry milk and at once gained very rapidly, gaining four pounds and one-half in six weeks. Then he was taken off the dry milk and promptly slipped back in weight, although he had no recurrence of his rheumatism. Again given milk, fortified with the dry milk, he again proceeded to gain.

ROBERT A. BLACK, M.D.

Chicago, Ill.

Heart Disease*

IN recent years mercurial diuretics have been developed so that we now have a diuretic which, in congestive heart failure, approaches the ideal. It is usually non-toxic, can be given in various ways and is usually effective. This diuretic is known as Salyrgan, and, if other diuretics are not effective, this will almost always be of some benefit. There are practically no contraindications to its use in congestive heart failure except in the presence of chronic kidney disease with nitrogen retention.

If given intravenously, great care should be taken that every drop of the solution enters the vein and that none works its way into the subcutaneous tissues. If this happens, a marked local reaction may take place, and even sloughing. The drug works almost as well intramuscularly as it does intravenously, and it is advantageous to dilute it with 5 or 10 cc. of isotonic saline solution and 1 or 2 cc. of 1 percent Novocain solution.

If no results are obtained by administering 2 cc. of Salyrgan, it is probably unwise to give a larger dose. Its effect is enhanced by the combined use of ammonium nitrate, 80 to 120 grains a day.

LEWIS M. HURXTHAL, M.D.

Boston, Mass.

*New Eng. J. of M., July 12, 1934.

Physiologic Sterility*

THE anterior lobe (pituitary) secretion activates the ovary. The corpus luteum inhibits the posterior lobe secretion and maintains pregnancy. When the corpus luteum withers, the oxytocic principle of the posterior lobe secretion asserts itself and labor is brought about. Fecundation is possible only when the sperm cell is properly timed to meet the egg cell.

We are satisfied that the following conclusions are justified:

1.—Hormones play a major role in pregnancy.

2.—The sperm and egg cells, detached from their respective breeding places, have a very limited time to live. For the egg cell it is not longer than one day. For the sperm cell it is two to three days.

3.—Every normal, regularly-menstruating woman has a definite ovulation period.

4.—Every normal, regularly-menstruating woman has a definite period of physiologic sterility and a definite period of fertility in each cycle.

5.—Cohabitation must be properly timed with ovulation if pregnancy is to result.

6.—Pregnancy may be brought about or avoided at will by the observation of these two periods of time.

DRS. A. G. MILLER, C. H. SCHULZ
and D. W. ANDERSON.

Hobart, Ind.

Metrazol in Barbiturate Poisoning†

MANY laboratory experiments have shown that Metrazol (pentamethylenetetrazol) has a specific antagonistic action against the various barbituric acid derivatives, such as Evipal, Nembutal, Amytal, Avertin, Pernoc-ton and others.

In animals deeply anesthetized with these drugs, Metrazol produces marked specific stimulation of the respiratory center, usually without any symptoms of tremors or convulsions. At the same time, the associated vasomotor center is stimulated, with a marked circulatory response, improvement in blood pressure, etc.

These experimental findings suggest that this drug should also be useful, clinically, in the treatment of shock from trauma, drowning, poisoning, etc.

D. E. JACKSON, M.D.

Cincinnati, O.

*Surg., Gyn. & Obst., June, 1933.

†J. Lab. & Clin. Med., Oct., 1934.

DIAGNOSTIC POINTERS

The Pressure Test in Diagnosis of Bronchial Asthma

MANUAL pressure, applied to the chest during expiration, forces air out of the lungs and bronchi. In normal persons this procedure provokes no adventitious râles in the chest. In persons who have mild spells of wheezing and dyspnea, with no definite attacks, the pressure test elicits sibilant and sonorous râles. In cases of emphysema and bronchiectasis, the test is negative.—Dr. A. H. FINEMAN, of New York, in *M. J. Record*, May 4, 1932.

Complications of Diabetes

TUBERCULOSIS is three times as common in diabetic individuals (thirteen times as common in diabetic children) as in the general population.

Cancer appears to be more common and more rapidly fatal in diabetics than in others. The incidence of cancer of the pancreas is 13 percent in diabetics and 4 percent in the general statistics.—Dr. ELLIOT P. JOSLIN, in *Chicago M. S. Bul.*, Mar. 24, 1934.

Emphysema of the Mediastinum

INTERSTITIAL emphysema of the mediastinum may cause a systolic "crunching" sound over the heart, and severe pain, resembling that of coronary occlusion.—Dr. LOUIS HAMMAN, Baltimore, Md.

Why Remove the Tonsils?

THE statement that the tonsils were placed in the body for some purpose and that they should not be removed, is sometimes made with an apparently convincing air of logical finality and ignores the existence of disease completely. But we must face realities.

We know that any organ may yield to the stresses and strains of life and become diseased sooner or later, whence must arise the questions: Can it be restored to useful function, if this is indispensable, or if not, is it more profitable for the possessor to have it removed or retained? If the tonsil is not diseased and is causing no symptoms deleterious to the patient's health, retain it. If

it is diseased and causing symptoms of a local or general character likely to produce serious consequences, it would be a gross negligence to retain it. There is no simple routine or hard-and-fast rule. The solution will be provided by judgment and discrimination, which is usually associated with training and experience, based upon personal responsibility.—Dr. J. F. O'MALLEY, in *Practitioner* (Lond.) Nov. 1932.

Cancer of the Lip

IF a lesion of the lip does not show signs of healing in ten days or two weeks, it should be regarded as cancer until the contrary is proved.—COMMITTEE ON CANCER CONTROL, in *Weekly Roster and Med. Digest*, Philadelphia.

Cancer of the Prostate

ABOUT one out of five men who have an enlarged prostate, have cancer of that organ.

The early, suggestive symptoms are:

- 1.—Frequency of urination (especially at night).
- 2.—Painful urination.
- 3.—Hematuria.
- 4.—Pain in the rectum or at the bladder neck.
- 5.—Sciatic pain.

Any of these symptoms call for a careful rectal and cystoscopic, and possibly a roentgenologic, examination to rule out cancer.—Dr. BENJAMIN S. BARRINGER, in *Bul. Am. Soc. for Control of Cancer*, Aug., 1934.

Pied Forcé

PIED FORCÉ is a condition which manifests itself by chronic discomfort and later moderate swelling over the shaft of the second or third metatarsal. Clinically and radiologically it may strongly suggest a fracture with a very mild reaction. After overuse of feet unaccustomed to strain; e.g. in army recruits and very enthusiastic hikers, a fracture of the shaft occurs quietly, without particular incident or pain. Treatment consists in supporting the feet adequately in a stout plaster or boot until x-ray examination shows

sound bony union, in addition to care of the feet on the lines already described. This condition may account for a few of the cases of obstinate pain in the feet, which are cropping up at present due to "overhiking."—Dr. H. DOB, in *Practitioner* (Lond.) July, 1932.

Scarlet Fever

IF there is any question of a diagnosis of scarlet fever, it is scarlet fever in 95 percent of cases.

The best time to make a diagnosis is at the first visit. Then stick to it!—Dr. HAROLD B. CUSHING, Montreal, Can.

Auricular Fibrillation and Hyperthyroidism

IF the cardiac apex beat is over 100 to the minute and the radial pulse less than that, with apparent gross irregularity, the case is probably one of auricular fibrillation, which is most frequently due to latent hyperthyroidism; in fact, transient fibrillation of the auricle is the most common cardiac symptom of thyrotoxicosis.—Dr. SAMUEL LEVINE, Boston, Mass., in *Bul. Chicago M. S.*, Dec. 24, 1932.

Masked Spinal Cord Conditions

A CONDITION often very widely diffused and very puzzling in diagnosis, which gives many of the signs found in cases of pernicious anemia, such as spasticity, paraplegia, numbness, tingling, burning, cold sensations, disorders of attitude sense and perhaps muscular weakness, is serous meningitis, and I have published a carefully observed case in which spinal cord compression was diagnosed and the true condition only suspected and verified at operation.—Dr. TOM A. WILLIAMS, of Washington, D. C., in *M. J. & Record*, Aug. 3, 1932.

Intermittent Headache

IN a series of 25 cases of intermittent headache, occurring particularly during menstruation, 17 of the patients had well-marked abnormalities in the radiographic appearance of the sella turcica. It is suggested that, in this series, the paroxysmal headache was due to the development of local tension in the sella turcica, particularly at the time of menstruation.—Dr. A. P. THOMSON, in *Lancet* (Lond.) July 30, 1932.

The Test for Occult Blood

THE labor entailed in counting the red cells in urinary sediments restricts its usefulness in clinical work. We have found the following procedure useful:

1.—Orthotolidine, 1 percent, in chemically pure methyl alcohol. (It dissolves with slight difficulty and keeps at least ten months.)

2.—Glacial acetic acid, one part, and commercial hydrogen peroxide two parts. (This keeps for three or four months, probably longer.)

3.—Fifteen (15) cc. of urine is centrifugated at about 1,500 revolutions per minute for five minutes. The supernatant fluid is poured off. A portion of the sediment is prepared for microscopic examination in the usual way. To the remaining sediment two drops of the orthotolidine solution is added, plus two or three drops of the acid-peroxide solution. In the presence of blood cells aggregating 100 per cubic millimeter of sediment (approximately 1,350 per cubic centimeter of urine) a greenish-blue color develops, lasting about one minute. In the presence of from 300 to 500 red cells per cubic millimeter of sediment (approximately 4,000 to 6,500 cells per cubic centimeter of urine) a deeper blue color develops, lasting about one minute. In the presence of larger numbers of red cells, aggregating 1,000 per cubic millimeter of sediment (approximately 13,000 per cubic centimeter of urine), as in hemorrhagic Bright's disease (glomerulonephritis), a deep-blue color develops, lasting two minutes or longer.—WILLARD J. STONE, M.D., and GEORGE T. BURKE, M.D., in *J. A. M. A.*, May 12, 1934.

Pleurisy With Effusion

THE treatment in cases of pleurisy with fluid in the pleura, until the nature and extent of the fluid is established, is practically that for any severe infection; namely, rest in bed, careful nursing, milk diet and treatment of symptoms. All clinical means of investigation should be employed, including examination of the sputum, a blood count to reveal leukocytosis as an evidence of pus formation and, where possible, x-ray examination. Exploratory puncture is desirable in most cases and should be carried out with the same antiseptic and analgesic precautions as those employed in paracentesis. The fluid obtained should be examined cytologically and bacteriologically.—Dr. R. A. YOUNG, of London, Eng., in *Practitioner*, July, 1932.

NEW BOOKS

Any book reviewed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE AND SURGERY, Medical & Dental Arts Bldg., Waukegan, Ill., is accompanied by a check for the published price of the book.

A book is a friend; a good book is a good friend. It will talk to you when you want it to talk, and it will keep still when you want it to keep still—and there are not many friends who know enough to do that. A library is a collection of friends.—LYMAN ABBOTT.

Cabot: Physical Diagnosis

PHYSICAL DIAGNOSIS. By Richard C. Cabot, M.D., Professor of Clinical Medicine Emeritus in Harvard University, Formerly Chief of the West Medical Service at the Massachusetts General Hospital. Eleventh Edition. Baltimore: William Wood & Company. 1934. Price, \$5.00.

The new eleventh edition of this standard textbook has been thoroughly revised and completely reset in new type. By omitting the chapter on the blood, and laboratory data which are no longer taught as part of physical diagnosis, space has been found for much valuable new material, greatly improving the book. This includes a new and profusely illustrated chapter on The Electrocardiogram, also new or enlarged sections on Subacute Infectious Endocarditis, Coronary Heart Disease, The Measurement of Cardiac Reserve, Pulmonary Heart Disease, The Heart in Myxoedema, X-Ray Examination in Tuberculosis, Latent Tuberculosis, Recovery from Tuberculosis, Tuberculosis in Children, Cancer of the Bronchi and Lung, The Diagnosis of Pulmonary Emphysema, Pneumoconiosis, Pulmonary Embolism, and Amoebic Dysentery. Many new illustrations have been added but the price is still only \$5.00. Every practitioner needs such a work, and as a textbook, this has rarely, if ever, been equalled—the work of a great master of diagnosis, giving his own personal knowledge and experience.

Stevens: Medicine

A MANUAL OF THE PRACTICE OF MEDICINE. Prepared Especially for Students. By A. A. Stevens, A.M., M.D., Formerly Professor of Applied Therapeutics in the University of Pennsylvania; Honorary Consulting Physician to the Philadelphia General Hospital; Consulting Physician to St. Agnes Hospital, Philadelphia, etc. Philadelphia: W. B. Saunders Company. 1934. Price, \$3.50.

Although this manual is intended primarily for the student, the general practitioner will find it a valuable reference book. Diseases are concisely discussed under the following headings: Etiology, Symptoms, Diagnosis, Prognosis and Treatment.

In preparing the thirteenth edition of this manual, much obsolete matter has been deleted, numerous additions have been made, and many sections have been entirely rewritten. Reference to the following subjects is made for the first time or is considerably extended: Megacolon, toxic cirrhosis of the liver, subacute glomerulonephritis, arteriosclerotic nephritis, changes in the chemical constituents of the blood, von Jaksch's anemia, agranulocytic angina, hereditary thrombasthenia, hyperadrenalinism, hyperparathyroidism, hypoparathyroidism, diseases of the reticulo-endothelial system, acute coronary occlusion, congenital heart disease, arterial hypotension, massive collapse of the lung, psittacosis, hyperinsulinism, acute serous meningitis, spontaneous arachnoid hemorrhage, osteitis deformans, osteitis fibrosa cystica, and epidermophytosis. These changes have been made without encroachment upon the elementary character of the book nor added materially to its size.

Legge: Industrial Maladies

INDUSTRIAL MALADIES. By Sir Thomas Legge, C.B.E., M.D., Oxon, D.P.H. Cantab., Late H. M. Senior Medical Inspector of Factories and Medical Advisor to the Trades Union Congress. Edited by S. A. Henry, M.A., M.D., D.P.H. Cantab., D.T.M. Liverpool, H.M. Medical Inspector of Factories. Oxford University Press, London: Humphrey Milford. 1934. Price, \$4.25.

This posthumously published volume represents the experience of a man who was the first medical inspector of factories in England and who, since that time (1898), devoted himself continuously to all matters pertaining to occupational diseases. The wide knowledge of the author at once stamps the work as one that is authoritative and conservative.

There are 15 chapters covering the usual phases of industrial maladies, including particularly poisoning by lead and other metals, by organic compounds, by fumes and gases, etc. Silicosis, various dermatites, tar cancers and other specific industrial diseases have chapters devoted to them.

Although there are many excellent treatises on industrial maladies, this one will attract special interest and attention owing to the

author's life-long experience and his studies and knowledge of the subjects dealt with, as well as the fact that he was recognized internationally as an authority on industrial diseases and industrial hygiene.

There is a list of books and publications by the author at the end.

Holmes: Popular Chemistry

OUT OF THE TEST TUBE. By Harry N. Holmes, Ph.D., Oberlin College. New York: Ray Long & Richard R. Smith. 1934. Price, \$3.00.

An outline of the science of chemistry seems to be the aim of the author in his book, "Out of a Test Tube"; and what a thrilling outline it is!

From the very beginning of the life of man, elemental discoveries in the science of chemistry have been made and are still being made, either by accident or by highly organized research and thought. This book, teeming with information regarding these discoveries and how they have evolved into the complicated and valuable scientific information of today, written and presented in such a manner that it may be understood and digested by the layman, and still have great value to the individual more or less acquainted with the science and art of chemistry, deals with such subjects as the elements, the theory of atomic structure, and methods of research. It also discusses and gives many interesting facts concerning our present-day needs, such as rubber, dyes, fertilizers, metals, medicines, foods and clothing. Industry, agriculture, medicine, warfare and other fields are presented, facts being given to show how they have advanced only with the advance of chemical knowledge.

It is time well spent to read this very interesting and stimulating book; easy reading but filled with information and food for thought as to the future and its possibilities.

J. R. C.

Goodman: Benjamin Rush

BENJAMIN RUSH. Physician and Citizen. 1746-1813. By Nathan G. Goodman, M.D. Philadelphia: University of Pennsylvania Press. 1934. Price, \$4.00.

Dr. Goodman has given a completely rounded portrait of this unusually busy and benevolent man. His book should interest all who owe so much of the political, social and medical benefits of the present to the "great and good Dr. Benjamin Rush."

"Founding Father" is no idle phrase when applied to Dr. Rush. His record in "firsts," as revealed in this first full biography, is almost unmatched among the early Americans. It includes: first American psychiatrist; founder of the first free dispensary, first temperance and anti-slavery societies, first Sunday school system, the College of Physicians and Dickinson College; first formal professor of chemistry; author of the first chemistry text, and the first book on mental diseases.

In addition, Rush was intensely active during the Revolution; helped Thomas Paine publish his "Common Sense," directed hospitalization in the Revolutionary War, signed the Declaration of Independence (the only M.D. on the list), and promoted the Constitution. He also advocated many modern reforms in medical practice and teaching, in penal laws and public education.

Every physician should have some knowledge of the history of his profession, and this is a good book with which to begin a historical library, or a worthy addition to one already started.

Young: Money

THE NEW MONETARY SYSTEM OF THE UNITED STATES. By Dr. Ralph A. Young, of the Wharton School of Finance and Commerce of the University of Pennsylvania. New York: The National Industrial Conference Board, Inc. 1934. Price, \$2.00.

This book reviews the development of gold-standard monetary systems; describes the new monetary system in comparison with the former system in the United States; analyzes the new plan of money management; considers the implications of the new monetary system for national recovery and stability; and presents the summary and conclusions. Appendices contain a tabular comparison of the old and new monetary systems, a description of the various types of money, and a statement of the total amount of money outstanding.

Clapp: Cataract

CATARACT. Its Etiology and Treatment. By Clyde A. Clapp, M.D., F.A.C.S., Associate Professor of Ophthalmology, Johns Hopkins University; Professor of Ophthalmology, University of Maryland; Visiting Ophthalmologist, Johns Hopkins Hospital and Wilmer Institute; Ophthalmologist, University of Maryland Hospital. Philadelphia: The Lea and Febiger Company. 1934. Price, \$4.00.

This comprehensive work on the crystalline lens and its pathologic changes will be of interest chiefly to those specializing in ophthalmology. While most of the book is devoted to treatment, a considerable amount of space has been given to embryology, comparative anatomy, physiology, chemistry of the lens, and other related topics. Many excellent illustrations are included.

Kellogg: Surgical Anatomy

THE ANATOMY OF SURGICAL APPROACHES. By L. C. Kellogg, A.B., M.D., Professor of Anatomy, College of Medical Evangelists, Loma Linda and Los Angeles, California. Baltimore: William Wood & Company. 1934. Price, \$1.50.

This is an entirely new brief manual of applied surgical anatomy which well serves the double purpose of a guide to the surgeon

in carrying out surgical procedures not frequently performed, and also as a laboratory guide for students. Many of the procedures are more or less generally known to the medical profession, but some of them are original and not described elsewhere. The directions are strikingly simple and concise, but explicit and easy to follow. The author demonstrates how vessels, nerves, and bones can be reached for treatment with the least possible damage to overlying structures, and how pus pockets, especially those of the hand, may be drained with ease and without leaving troublesome scars. Every surgeon and every medical student should possess a copy of this inexpensive and exceedingly practical little book, no matter what other works on anatomy he may own.

Martin: Prohibiting Poverty

PROHIBITING POVERTY. Suggestions for a Method of Obtaining Economic Security. By Prestonia Mann Martin. Eighth Edition. New York: Farrar & Rinehart. 1934. Price, \$1.00.

Those who have never read Bellamy's remarkable books, "Looking Backward" and "Equality," or Pelley's "No More Hunger," will find the contents of this small volume decidedly startling. Those who have read the more complete and better digested books will be interested to see the same general ideas appearing again, with variations, from another source, and will probably want to add it to their libraries.

Briefly, Mrs. Martin's "National Livelihood Plan" calls for the drafting of all the young people of both sexes from 18 to 26 years, into an industrial army (the "Commons"), for the production of the necessities of life (food, clothing, shelter, transportation, protection and education) for every citizen in the country, from birth to death. These necessities can not be bought nor sold nor traded in any way, but are furnished to all, in kind, daily or as need arises.

After graduation from the industrial army, the graduates enter the "Capitals," where luxury goods of all kinds are produced and traded in for money, just as all things are handled at present. A living is, however, inalienable and nontransferable. In other words, this is a project whereby collectivism would be applied to necessities, while individualism would be reserved for the production and sales of luxuries for profit.

The author appears to be a great admirer of Henry Ford and quotes him freely and effectively. Her material is not well coordinated, and repetitions of ideas, and even of phraseology, are unnecessarily frequent. Moreover, the details of her plan are by no means worked out fully; but her effort to present a way of attaining safety without losing freedom is worthy of some study. Here and there, telling phrases appear, such as: "One can hardly read a book on money without having one's reason impaired . . . our money system lies beyond the reach of human reason."

"To control the means whereby men live is not very different from owning their persons."

This little volume is recommended to those thinking people who are not shocked by a new idea, even if it is revolutionary.

Dodson: Genitourinary Diseases

SYNOPSIS OF GENITOURINARY DISEASES. By Austin I. Dodson, M.D., F.A.C.S., Richmond, Virginia, Professor of Genitourinary Surgery, Medical College of Virginia; Genitourinary Surgeon to the Hospital Division, Medical College of Virginia; Genitourinary Surgeon to Crippled Children's Hospital; Urologist to St. Elizabeth's Hospital; Urologist to St. Luke's Hospital and McGuire Clinic. With 111 Illustrations. St. Louis: The C. V. Mosby Company. 1934. Price, \$3.00.

This is an excellent and well made little manual of the essentials of urology, intended for the use of medical students and physicians who want to refresh their knowledge of this subject, in preparation for examinations or for other reasons. It should serve its purpose well.

Maher: Electrocardiography

ELECTROCARDIOGRAPHY. By Chauncey C. Maher, B.S., M.D., Assistant Professor of Medicine, Northwestern University and the Montgomery Ward Medical Clinics; Attending Internist at the Cook County Infirmary and the Cook County Hospital and the Passavant Hospital, Chicago. Baltimore: William Wood and Company. 1934. Price, \$4.00.

In the study of heart disease the most rapid advances have been made in the physiologic field. It has been primarily through the use of the electrocardiograph that our knowledge of the intrinsic mechanism of the heart beat has been increased. The introduction of the electrocardiograph into the laboratories of most hospitals has placed many physicians other than cardiologists at a disadvantage concerning its use. There has been need for a treatise on electrocardiography, for use by the general practitioner, the medical student and the specialist, exclusive of the cardiologist, that they may learn the value of the electrocardiogram in the diagnosis of cardiac disease and learn to correlate the electrocardiographic findings with their clinical data. This book should meet this need. All controversial literature and bibliography have been omitted, making it concise and brief.

D. H. A.

Ponton: Nomenclature

AN ALPHABETICAL NOMENCLATURE OF DISEASES AND OPERATIONS. By T. R. Ponton, B.A., M.D. Endorsed by the American College of Surgeons and the American Hospital Association. Chicago: Physicians' Record Company. 1934. Price, \$4.75.

This up-to-date nomenclature will be of especial interest to record librarians and all

others who are interested in correct terminology. It is published in loose-leaf form, to facilitate future corrections. The following division of terms is made: (1) Nomenclature of Diseases; (2) Regions (alphabetical); (3) Regions (classified); (4) Nomenclature of Operations; (5) Poisons.

The entire work has been rewritten, using Latin terms and Latin derivatives in so far as it was thought they would be accepted. Mixed terms have been inserted in many cases because, at the present time, their use is so common that it would defeat the purpose aimed at to refuse to acknowledge them.

International Clinics

INTERNATIONAL CLINICS. Editor, Louis Hamman, M.D., Visiting Physician, Johns Hopkins Hospital, Baltimore. Volumes II and III, forty-fourth series. Pp. 317 and 327, with illustrations. Cloth. Philadelphia: J. B. Lippincott Company. 1934. Price, \$12.00 a year, four issues.

A quarterly of illustrated clinical lectures and especially prepared original articles on all phases of medicine, by leading members of the profession.

Keeping abreast of the progress in medicine presupposes much reading and would be impracticable if one had to select the points of value from the present mass of medical publications. "International Clinics" performs this valuable service for physicians.

A new feature enables each subscriber to get real postgraduate work in his own home without additional cost. In every volume during 1934 a printed supplement giving the general history and physical examination of two problem cases is enclosed. Arrangements are made whereby further information may be obtained for the diagnosis of these cases, and a record of the actual outcome of each case is supplied, so that the physician can compare it with his own diagnosis.

In these volumes appear practical articles on operative shock, the crippled hand, the heart and athletics, functional symptoms in relation to organic disease, and 26 other subjects. There is a frontispiece in color in each volume. The "International Clinics" contains something of interest to every physician, being practical, economical and well illustrated.

Vaughan: Allergy

ALLERGY AND APPLIED IMMUNOLOGY.

A Handbook for Physician and Patient, on Asthma, Hay Fever, Urticaria, Eczema, Migraine, and Kindred Manifestations of Allergy. By Warren T. Vaughan, M.D. St. Louis: The C. V. Mosby Company. 1934. Price, \$5.00.

Such a vast number of new and noteworthy contributions are made to this subject each year, that a volume devoted to allergy rapidly becomes out of date. Dr. Vaughan has revised his book, and the general practitioner will find it comprehensive and authoritative. Controversial material has been omitted, keep-

ing the book as brief as possible. Twenty-three illustrations and eighteen charts are included.

Sadler: Piloting Modern Youth

PILOTING MODERN YOUTH. A Guide for Parents, Teachers, and Others Dealing with Adolescents. By William S. Sadler, M.D., F.A.C.S., Formerly Professor at the Post-Graduate Medical School of Chicago; Senior Attending Surgeon to Columbus Hospital; Director of the Chicago Institute of Research and Diagnosis; etc. With the collaboration of Lena K. Sadler, M.D., F.A.C.S., Associate Director of the Chicago Institute of Research and Diagnosis, etc. Introduction by M. V. O'Shea, B.L., Professor of Education, University of Wisconsin. New York and London: Funk & Wagnalls Company. 1931. Price, \$3.50.

The problems of adolescent youth are presented and discussed at length by Dr. Sadler in his book, "Piloting Modern Youth." The subject is dealt with in a manner easily grasped by the parents, teachers and others interested in the welfare of the younger generation. The material presented is evidently for average consumption and not for theorists and students, for technical discussions and terms are omitted and a non-technical vocabulary and an easy, simple style of writing used that makes it very interesting and enjoyable reading.

The book covers a wide range of material that has been gathered and studied by the author in his work. It deals with the home, education, business and religious environment of the adolescents and their reactions toward them. It describes the change in attitude of the youth during this period toward sex, school, parents and home, work, and other similar topics, presenting the adolescent both as he sees himself and as we see him and, by the use of many interesting case reports, the author emphasizes the topics under discussion. It discusses the emotion of the child in his teens and our attitude toward him and how we may help in our contacts with him to mold him, during this period, to become as near a perfect, socialized individual as is possible. In short, it is a book which should aid parents, teachers, physicians and others in helping young people to negotiate the more or less perilous journey from the beginning of the teens through adolescence to maturity. J. R. C.

Kuntz: Autonomic Nervous System

THE AUTONOMIC NERVOUS SYSTEM.

By Albert Kuntz, Ph.D., M.D., Professor of Micro-Anatomy in St. Louis University School of Medicine. Second Edition, Enlarged and Thoroughly Revised. Illustrated with 73 Engravings. Philadelphia: Lea & Febiger. 1934. Price, \$7.50.

In this second edition of Professor Kuntz' single volume dealing with the autonomic nervous system, the text has been revised in the light of the more recent studies which, in some instances, have led to a changed point of view.

In the twenty chapters which make up the book, the autonomic nervous system is described, briefly but adequately, in relation to the organs and tissues innervated through it; and, in relation to the cerebrospinal nervous system, to point out its development and general physiologic relationships to the cerebrospinal nervous system and to set forth the more important pathologic and clinical data bearing on the functional relationships of this division of the nervous system in disease. The last chapter deals with the surgery of the autonomic nervous system.

This is an authoritative work which, although encompassed in a single volume, deals sufficiently with all the essential known facts concerning the autonomic nervous system and its rôle in health and disease. The style is clear and simple and the plan and sequence of the chapters logical. It should be found an excellent textbook for teachers and students, and practicing physicians will get all necessary informatory and clinical data from it. The bibliographic references at the end fill considerably more than 100 pages and the index is ample.

Surgical Clinics

SURGICAL CLINICS OF NORTH AMERICA. Chicago Number, Volume 14, Number 4, August, 1934. Philadelphia and London: W. B. Saunders Company. Issued serially, one number every other month. Per clinic year February 1934 to December 1934. Prices: Paper \$12.00; cloth \$16.00, net.

The August, 1934, number of the *Surgical Clinics of North America* contains 34 contributions by Chicago surgeons. It begins with a symposium on plastic surgery, among the items of which we note particularly a paper by Drs. Carl and W. C. Beck on "Plastic Reconstruction of the Fingers by Transplantation of the Toes," and one by Dr. Gatewood on "Plastic Repair of Hypospadias." There is a good paper by the late Dr. C. A. Hedblom and Dr. W. Van Hazel on the "Surgical Treatment of Tuberculosis." Other papers which will attract attention are "Sub-

dural Hemorrhage," by Drs. George de Tarnowsky and P. J. Sarma; "Early Signs and Symptoms of Brain Tumor," by Dr. P. C. Bucy; "The Andrews Implication Method for Inguinal Hernia," by Dr. E. Andrews; and the "Symposium on Peptic Ulcer," with contributions by Drs. A. D. Bevan, R. C. Brown and Cassie B. Rose.

This number is up to the usual high standard of this important clinical serial.

Wright: Infant Feeding and Paediatric Practice

ESSENTIALS OF INFANT FEEDING AND PAEDIATRIC PRACTICE. By Henry P. Wright, B. A., M. D., Fellow of the Royal College of Physicians (c); Fellow of the American College of Physicians; Fellow of the Canadian Society for the Study of Diseases of Children; Lecturer in the Department of Paediatrics, McGill University, Montreal; Physician-in-chief to the Montreal Children's Hospital; Physician to the Children's Memorial Hospital, Montreal; Assistant Paediatrician to the Royal Victoria Hospital, Montreal. Oxford University Press, London: Humphrey Milford. 1934. Price, \$4.25.

In this book the author, who is physician-in-chief of the Montreal Children's Hospital, makes an attempt to combine the modern teaching of pediatrics and the general practice of medicine and presents it in a practical manner for the benefit of the trained nurse, the student of medicine and the general practitioner. It is not, therefore, a book for specialists in children's diseases. There are three main sections dealing, respectively, (a) with the growth, development and dietary of the infant; (b) with disturbances of nutrition; (c) the common preventive measures and treatment of children's diseases.

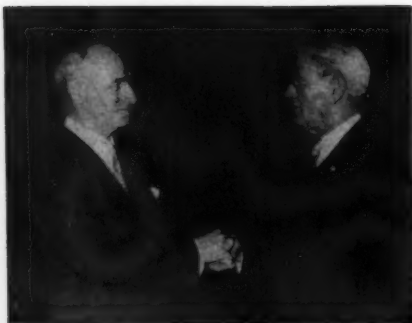
The general practitioner will find here a well put together but not too long treatise, based on teaching experience and clinical practice in dealing with the main themes. All important and necessary facts are included and there is neither splurge nor padding.

A RARE VOLUME

There has lately been placed upon the shelves of the Lloyd Library an unpagged volume of (Joannes) Damascenus Mesue, an Arabian physician who lived A. D. 928-1016 (?). It bears the title *Canones Universales*. The last page with the date "Anno domini Millesimo quingentesimo decimo tertio. Die vero XV Mensis Julii (July 15, A. D. 1513).

It was in the twelfth century that Mesue's *Canones Universales* including *De Simplicibus*, *De Electuariis* etc. were assembled by Nicholas de Salerno, with the Arabic Therapeutics on the basis of the Constantine reform. In the same volume appears *The Antidotarium Nicolai*, containing one hundred and thirty-nine complex prescriptions arranged in alphabetical order, together with many new Eastern drugs, also the original formula for the anesthetic sponge, the sponge producing sleep (*Spongia Somnifera*.) This formulary of Nicholas "occupied an authoritative position during all of the Middle Ages and was the basis of all future Pharmacopoeias."—Half Hours with the Lloyd Library.

MEDICAL NEWS



(c) Keystone View Co.

Presidents of The College of Surgeons

AT the left, in this picture, Dr. Donald C. Balfour, of Rochester, Minn., president-elect of the American College of Surgeons for 1935 and '36, is shown receiving the congratulations of Dr. Robert B. Greenough, of Boston, President of the College for 1934 and '35. This photograph was taken at the meeting of the College in Boston, in October, 1934.

Heart Specialists at Bad Nauheim

TWICE as many heart specialists, from Germany and foreign countries (580), took part in the tenth advanced study course of the Association of Bad Nauheim Physicians in 1934 as in 1932.

Bad Nauheim is the seat of the Kerckhoff Foundation, the great heart research institution.

Dr. McArthur Passes

ONE of the prominent figures in American surgery was added to the ranks of medical history with the sudden passing, on November 5, 1934, of Dr. Lewis Linn McArthur, senior surgeon of St. Luke's Hospital, Chicago, for more than forty years.

Dr. McArthur, who was 76 years old, had always enjoyed exceptionally good health, and saw patients at his office, as usual, on the day of his death.

With Senn, Fenger and Murphy, McArthur was among the first surgeons to adopt aseptic

measures in surgery; and, with Bevan and Billings, was the third member of a triumvirate distinguished in the early medical history of Chicago.



(c) Keystone View Co.

A Symbol of American Good-Will in the Orient

THE picture shows two units of St. Luke's International Medical Centre, constructed largely by popular subscription in the United States, now nearing completion in Tokyo, Japan, and which will be formally dedicated in the spring.

Research Fellowships

MERCK and Company have recently established five research fellowships: One at the University of California, for the study of pharmacology; three at the University of Pennsylvania, for the study of physiology, of bacteriology, and of the effects of sedative drugs on the horse and ox; and one at the University of Virginia, through the National Research Council, for the study of alkaloids.

Multiple Births

WHILE there are 2,500,000 twins in the United States, the proportion of twin births to single babies, in any one year, is 1 to 93; of triplets, 1 to 8,649; of quadruplet births, 1 to 1,399,975; only 36 cases of quintuplet births are on record.

Among single births, 1,057 boys are born for each 1,000 girls; but the proportion of girls rises among multiple births, until, with quadruplets, there are 1,000 girls to every 548 boys.

SEND FOR THIS LITERATURE

TO ASSIST doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, Waukegan, Ill., will gladly forward requests for such catalogs, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this journal as to reliability and adaptability for physician's use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment, or medicinal supplies. **Make use of this department. Ask for clinical samples where these are offered.**

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|-------|---|-------|---|
| B-47 | Campho-Phenique in Major and Minor Surgery. Campho-Phenique Company. | B-759 | From "Poultesse" to "Cataplastm-Plus." Numotizine, Incorporated. |
| B-596 | The Pneumonic Lung. Its Physical Signs, and Pathology. The Denver Chemical Mfg. Co. | B-761 | For the Failing Heart of Middle Life—Theocalcin. Bilhuber-Knoll Corp. |
| B-610 | Bischoff Pharmaceutical Specialties. Ernst Bischoff Co., Inc. | B-766 | Incretone. G. W. Carnrick Co. |
| B-611 | Vera-Perles of Sandalwood Compound. The Paul Plessner Company. | B-768 | Yeast Vitamine—Harris. The Harris Laboratories, Inc., Tuckahoe, N. Y. |
| B-612 | Taurocol. The Paul Plessner Co. | B-771 | Anabolin—The standardized liver principle. The Harrower Laboratory, Inc. |
| B-613 | Specific Urethritis—Gonosan "Riedel." Riedel & Co., Inc. | B-774 | Adreno-Spermin. The Harrower Laboratory, Inc. |
| B-636 | Science's latest contribution to female sex hormone therapy—Progynon. Schering Corporation. | B-780 | The Intravenous Injection of Hydrochloric Acid. Loeser Laboratory. |
| B-642 | Ergoapiol (Smith) and Glykeron—(for sample, send narcotic registry number). Martin H. Smith Co. | B-781 | Dysmenorrhea—Hormotone. G. W. Carnrick Co. |
| B-669 | The Illinois Post Graduate Medical School Bulletin. The Illinois Post Graduate Medical School, Inc. | B-785 | Endo Liver Extract in the Treatment of Pernicious Anemia. Endo Products, Inc. |
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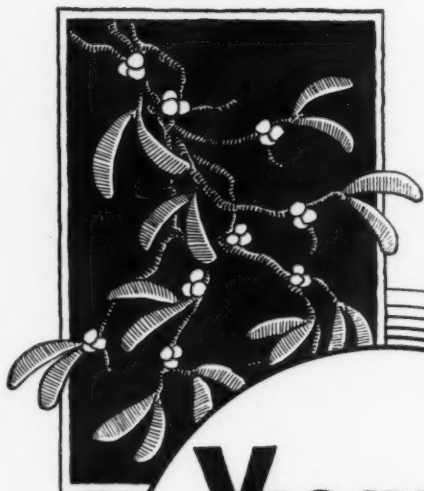
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